OBSERVATIONS

CONNECTED WITH

ASTRONOMY AND ANCIENT HISTORY,

SACRED AND PROFANE,

ON THE

RUINS OF BABYLON,

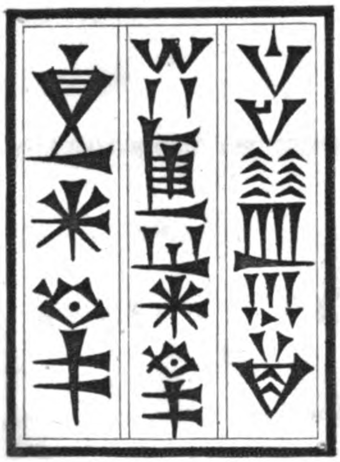
AS RECENTLY VISITED AND DESCRIBED BY

CLAUDIUS JAMES RICH, ESQ.

RESIDENT FOR THE EAST INDIA COMPANY AT BAGDAD;

WITH

Illustrative Engravings.



Persepolitan Characters.

BY

THE REV. THOMAS MAURICE, A.M.

Author of Indian Antiquities,

AND ASSISTANT LIBRARIAN AT THE BRITISH MUSEUM.

LONDON:

PRINTED FOR THE AUTHOR,

AND SOLD BY JOHN MURRAY, ALBEMARLE STREET.

1816.

OBSERVATIONS

CONNECTED WITH

ASTRONOMY AND ANCIENT HISTORY,

SACRED AND PROFANE,

ON THE

RUINS OF BABYLON,

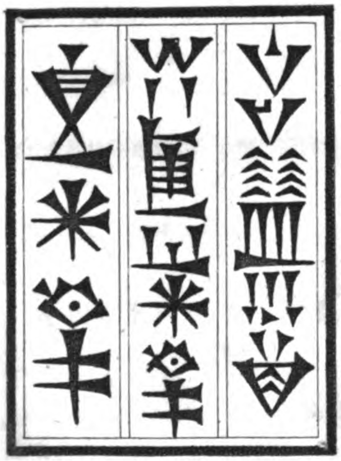
AS RECENTLY VISITED AND DESCRIBED BY

CLAUDIUS JAMES RICH, ESQ.

RESIDENT FOR THE EAST INDIA COMPANY AT BAGDAD;

WITH

Illustrative Engravings.



Persepolitan Characters.

BY

THE REV. THOMAS MAURICE, A.M.

Author of Indian Antiquities,

AND ASSISTANT LIBRARIAN AT THE BRITISH MUSEUM.

LONDON:

PRINTED FOR THE AUTHOR,

AND SOLD BY JOHN MURRAY, ALBEMARLE STREET.

1816.

MAURICE, Printer,
Fenchurch-street.

TO THE

RIGHT HONOURABLE

CHARLES PHILIP YORKE,

IN GRATEFUL TESTIMONY OF ACCUMULATED FAVOURS,

These Pages,

RETROSPECTIVE ON THE HISTORY,

AND

EARLY PROGRESS IN SCIENCE,

OF A

MOST ANCIENT PEOPLE,

Are respectfully Inscribed,

BY HIS EVER OBLIGED

AND FAITHFUL SERVANT,

THOMAS MAURICE.

PREFACE.

THE first of the two Sections, of which the following work consists, was printed a short time since as a rapid critique on Mr. Rich's Memoir, in a respectable REVIEW of the day. More profound and continued reflection on the interesting subjects discussed in his volume gave birth to the extended astronomical and mythological investigations in the subsequent Section. Their intimate connection with the history of the first ages of the post-diluvian world, and the earliest dawn of the

arts and sciences in Asia, will, I trust, secure them a favourable reception among those readers who are in the habit of cultivating this kind of antiquarian research, especially in its abstrusest path, ORIENTAL ASTRONOMY.

On the old disputed question, whether the Assyrians or Egyptians were the *elder* race of astronomers, although I have not presumed to give a decided opinion, yet, in the course of these Observations, there will, I fear, be found an evident leaning towards the well-known assertion of Cicero in favour of the former, expressed in his treatise De Divinatione, and founded on the very reason assigned by that great orator and philosopher, viz. the almost boundless extent of the plain of Shinar, and the uninterrupted view of the nocturnal heavens, which its inhabitants must have enjoyed in

that clear atmosphere and beautiful climate. The passage is as follows: "*Principio* ASSYRII, propter planitiem magnitudinemque regionum quos incolebant, cum cœlum ex omni parte patens et apertum intuerentur, trajectiones motusque stellarum observarunt*."

Whatever concerns the *geography* of this celebrated region of Asia has been so nearly exhausted by Major Rennel in his elaborate work on Herodotus, that little can be expected to be added to its instructive details. We must wait with patience the result of farther inquiries by Mr. Rich and other Asiatic travellers, although for reasons hereafter submitted to the reader there is no great probability of success attending them, at least ac-

* De Divin. lib. i. p. 3. edit. Cantab. 1730.

cording to the present generally received notions of the site and *enceinte* of ancient Babylon. For, vast as was the circumference of its mighty WALLS, and indelible as one would imagine were the lines of their demarcation, yet in the following pages it will be read with astonishment, that Mr. Rich, after the minutest investigation, could find no traces of them. I shall cite on this subject his own decisive expressions.

"I have not been fortunate enough to discover the least trace of them (the walls) in any part of the ruins at Hellah, which is rather an unaccountable circumstance, considering that they survived the final ruin of the town, long after which they served as an inclosure for a park; in which comparatively perfect state, St. Jerome informs us, they remained in his time. Nor can the depredations sub-

sequently committed upon them in the building of Hellah, and other similar places, satisfactorily account for their having *totally disappeared:* for, though it is evident they would have been the first object to attract the attention of those who searched after bricks, yet, when they had been thoroughly dilapidated, the mass of rubbish, which most probably formed the heart or substance of them, together with the very deep ditch, would alone have left traces sufficiently manifest at the present day." p. 44.

The accumulation of soil, however, from perpetual inundations of the river, when its embankments had once been suffered to go to decay, and the Euphrates itself having perhaps altered its course during the revolution of so many ages, may, in some degree, account for this disappearance of

the walls in a country, which originally was little better than a vast morass. What indefatigable labour, therefore, what unwearied toil, must the fabricators of these stupendous works have undergone, to construct, *on such a soil*, such immense edifices? To such toil the labour of erecting the pyramids appears trifling—but I will not anticipate the reflections which will naturally and more forcibly suggest themselves after a perusal of their unequalled efforts in architecture, detailed in the following pages.

While the reader is engaged with Major Rennel in the geographical survey of Babylon, and in measuring the remains of these gigantic fabrics, he may not be displeased, perhaps, to have near him a publication like the present, that goes pretty much at large into the history and progress in

science of the wonderful race who gave them being. Their high advance in *chemical* knowledge, in particular, though unfortunately applied to promote the purposes of a degrading superstition, the Sabian *fire-worship*, will undoubtedly excite his admiration and surprise.

From the ability of the Chaldæans to *execute*, as well as to *plan*, the great works under consideration, it would seem they were a race not less vigorous in *bodily* than in *mental* capacity; and on this head Major Rennel judiciously remarks, that "from the great weight of the bricks, it may be inferred that the workmen were very strong, able-bodied, men."

Though these pages are intended principally for the eye of the *astronomer* and *mythologist*, yet I

should hope they may contain matter not wholly uninteresting to other classes of readers. To the real judge and lover of classical antiquities, I need make no apology for having entered thus largely into mythological details; for HE well knows the truth of the position advanced in the beginning of this Preface, that, in respect to these very early periods of the world, all that remains of genuine history, except that contained in the sacred annals, is only to be obtained through the mazes of MYTHOLOGY.



Etch.d by J. Barlow.

The supposed **RUINS** *of the* **TOWER** *of* **BABEL,** *as seen, and described by Della Valle, in the Year 1616.*



The supposed RUINS of the TOWER of BABEL, as seen and described by Della Valle in the Year

OBSERVATIONS,

&c. &c.

SECTION I.

The immense antiquity of these RUINS *prevents even the site of ancient Babylon from being accurately ascertained; but the most probable hypothesis fixes it at and near* HELLA, *on the Euphrates; the chief arguments on which that hypothesis is founded. The whole country now called* IRAK, *once famous for its fertility and population, but now for the most part a barren swampy desert.—Summary description of Babylon and its edifices, from ancient classical authors.—The asserted extent of its walls supposed, by Major Rennel, to be an exaggeration, owing to a mistaken notion of the true standard of the Greek* stadium.—*The accounts of these ruins as given by modern travellers, who have successively visited them previously to Mr.* RICH. RAUWOLF, DELLA VALLE, NIEBUHR, OTTER, D'ANVILLE, BEAUCHAMP. *Their descriptions in general confirm and illustrate the classical accounts of them, particularly in respect to the form and elevation of the Temple of Belus, and its being constructed to face the* CARDINAL POINTS; *the two sorts of bricks,* SUN-DRIED *and* FURNACE-BAKED, *used in the construction of that Temple, and the massy walls; as, also, their being painted of different colours, and adorned with portraits of men and beasts.—The investigations of Mr.* RICH *are now commenced, in considerable detail.—His description of the country extending between Bagdad and Hellah.—His account of the ruinous mound named* AMRAM;—*of a second, called the* KASR;—*of the ruin denominated* DELLA VALLE'S;—*and of the* BIRS NEMROUD.—*Concluding reflections.*

WE shall cease to wonder at the various and often discordant accounts that have been given of the celebrated RUINS which form the subject of Mr. RICH'S Memoir, when we consider that a period of nearly four thousand years has rolled away since the first construction of the superb metropolis whose name they bear; and that, even in the time of the Parthian mo-

narchy (according to St. Jerome, on the 13th chapter of Isaiah) it was reduced to such a state of decay, that its walls included only a *park* where the kings of that dynasty were accustomed to take the diversion of the chace. Within their circumference, according to the terrible denunciation in Isaiah, desolation had long fixed her gloomy reign, and BABYLON, the *glory of kingdoms, the beauty of the Chaldees' excellency*, was then become the habitation of the *wild beasts of the desert*. Well, indeed, may the glory of this renowned place be said to have departed, when even its site cannot, with precision, be ascertained; and when the antiquary and the traveller are alike bewildered amid the perplexity of their researches. Mr. RICH, however, seems to have made up his mind in this respect, convinced by the forcible statements and sound arguments of Major Rennel, in his valuable work on the Geography of Herodotus, that the actual site of those ruins is in the environs of *Hella*, a town situated on the Euphrates, built out of its ruins in the tenth century, and distant about forty-eight miles from Bagdad.

This opinion is founded on, 1st, the latitude of the place, as given by Abulfeda, Ebn Haukal, Edrisi, and other oriental geographers, compared with the situation of Babylon, as recorded by classical writers *; 2nd, the stupendous magnitude and extent of the ruins at and near *Hella;* 3rd, its neighbourhood to the bituminous fountains of *His*, or *Hit*†, mentioned by Herodotus as being only eight days journey above it, of which viscid substance such immense quantities were necessary in the construction of a city whose towers, whose temples, and whose palaces, were built of

* Niebuhr has collected and compared their different accounts, and fixed that latitude at 32° 28′.

† It is denominated Is by Herodotus, but as the city of HIT (HEET) is exactly that distance from Hella, and abounds in asphaltic productions, there can be no doubt of the corruption of the text in this instance. It is mentioned by Edrisi, commonly called the Nubian geographer, as being washed by the FRAT; or Euphrates, at p. 197, when describing the courses of that river from its sources in Armenia, to its efflux into the Persian Gulph.

BRICK *dried in the sun*, or *baked in the furnace;* and 4th, the consideration of the whole surrounding district having been, for immemorial ages, and even at this day, distinguished by the name of *Babel*. Ebn Haukal, who flourished in the tenth century, writes thus: "BABEL is a small village, but the most ancient spot in all IRAK. The whole region is denominated BABEL from this place. The Kings of *Canaan* [he means Chaldea] resided there; and ruins of great edifices still remain*." Niebuhr, the intelligent traveller, and the present explorer of these ruins, attest that it still bears its ancient denomination.

It may be remarked, that in scarcely any district of Asia have so many great cities been erected as in this favored region, termed by the Arabians IRAK, those cities having sprung up, according as the Persian, Greek, and Islamite, conquerors successively became masters of the country. The abundance and fertility induced by the Euphrates and Tigris, and by a thousand canals, (many of them now dried up), but especially by the great canal called the NAHR-MALKA, or *fluvius regum*, which had been the labor of so many kings, and had for its object to join together those two great rivers, made it the chosen seat of princely domination. When properly irrigated and cultivated by human industry, this Mesopotamian region, which is now, for the most part, a barren desert full of lakes and morasses, and inhabited by savage Arabian hordes, must have been uncommonly productive.' But the exactions of an eastern despotic government have paralyzed the labours of the husbandman, and will probably long prevent the return of that abundance which was indispensibly

* Ebn Haukal, translated by Ouseley, page 70. This valuable addition to our oriental treasures in the geographical line was presented to the public by the learned translator in the year 1800; and in his elaborate preface he has proved it to be the source whence Abulfeda, the Nubian geographer, and other oriental writers of that class, derived many valuable materials for their respective works. Hella is not mentioned by him, for in fact it was not built until the 495th year of the Hegira, or A.D. 1101, when he had been dead above half a century.

necessary, when its population was immense, and its cities extensive and numerous. Among those that once raised their august summits on these plains, may justly be mentioned SELEUCIA, built by Seleucus Nicator as the rival of Babylon; CTESIPHON, memorable for the magnificent palace called TAUK-KESRA, or the throne of the mighty Chosroes, built by Nushirvan in the 6th century*; and the more modern, but far-famed, cities of Bagdad and Bassora. The greater part of the massy materials with which these cities were constructed were, it is evident, brought from the ruined towers and plundered palaces of Babylon; the bricks being of the exact size, imprinted with the same characters, and having undergone the operation of an intense fire. It ought therefore to excite our wonder, that such *ample*, rather than such *scanty*, remains of that proud capital at this day exist.

To do justice to our author's Memoir, we shall present the reader with a summary sketch from Herodotus, but without wholly neglecting the accounts of Diodorus Siculus and Strabo, of the situation, magnitude, and extent, of this vast metropolis, and then consider how far the ruins, explored by Mr. RICH with such persevering assiduity, correspond with those ancient accounts, in regard to their dimensions, their internal arrangement, and the antiquities occasionally dug out of their subterraneous recesses.

BABYLON was situated in a plain of vast extent, and bisected by the noble river Euphrates, at this place (according to Strabo) a *furlong* in breadth, but according to Diodorus *five furlongs*—a disparity, by the way, too great to be reconciled! Over this river was thrown a bridge of massy masonry, strongly compacted with iron and lead, by which the two sides of the city were connected; and the embankments on each side to restrain its current were lofty, and formed of the same durable materials

---

* Ebn Haukal, p. 351. See a plate of in Ives, at p. 289.

as the walls of the city. The city itself is represented by Herodotus to have been a perfect square, enclosed by a wall in circumference four hundred and eighty furlongs*. It is stated to have abounded in houses three or four stories in height, and to have been regularly divided into streets, running parallel to each other, with transverse avenues occasionally opening to the river. It was surrounded with a wide and deep trench, the earth dug out of which was formed into square bricks and baked in a furnace. With these, cemented together with *heated bitumen*, intermixed with *reeds* to bind the viscid mass, the sides of the trenches were lined, and of the same solid materials the walls of the vast dimensions above described were formed. At certain regular distances on them, watch-towers were erected, and below they were divided and adorned with a hundred massy gates of brass.

In the centre of each of the grand divisions of the city, a stupendous public fabric was erected. In one (the *eastern* side, as Rennel conjectures) stood the temple of Belus; in the other (or *western* division) in a large and strongly fortified inclosure, the royal palace, intended, doubtless, for defence as well as for ornament. The temple of Belus was a square pile, on each side of the extent of two furlongs. The tower erected in its centre was a furlong in breadth, and as much in height, the latter of which (taking the furlong at only 500 feet) is enormous, being higher, by 20 feet, than the great pyramid of Memphis, whose altitude was taken by Greaves. On this tower, as a BASE, seven other lofty towers were erected in regular succession; and the whole was crowned, according to Diodorus, with a brazen statue of the god BELUS, 40 feet high! The palace, intended also

---

* This computation, according to the presumed length of the ancient stadium, gives such a vast area for the city, (not less, according to Major Rennel, than about 126 square miles, or 8 times the area of London!!) that some error may reasonably be supposed to have here crept into the text, or the length of the stadium mistaken; but this matter shall be considered presently.

as a citadel, was erected on an area a mile and a half square, and was surrounded with three vast circular walls, which, as we are informed by Diodorus Siculus, were ornamented with sculptured animals resembling life, richly painted in their natural colours on the bricks of which they were composed, and *afterwards burnt in.* This may be mentioned as nearly the earliest specimen of *enamelling* on record. Indeed, it was scarcely possible for a nation, who were so well practised in the burning of bricks even to a vitreous hardness, to have been ignorant of this fine art; and that they could also *engrave* upon them, is evident (were such evidence wanting) from the characters at this day sculptured upon those that have been dug up and brought to Europe, two of which are preserved in the British Museum. On the far-famed hanging gardens, and the subterraneous vault or tunnel constructed by Semiramis or Nitocris, or the founder of Babylon, whoever he was, there is no necessity to dilate, as every trace of them, except what the idle fancy of travellers has surmised, must long since have disappeared; but such, in its general outline, was the MIGHTY BABYLON*!

Exaggerated as appear to be the statements of Herodotus concerning the extent of the walls of Babylon, yet have the descriptions of the cities and people of Asia in the venerable volume of the Father of History been found by scholars, in their eastern antiquarian researches, so frequently verified, that we are willing, with our great English geographer mentioned above, to impute either to the errors of transcribers, or to some mistaken notions of the length of the *Greek stade* by which his computations are regulated, what, in his generally correct page, seems to militate against truth and probability. To settle the point, both D'Anville and himself have employed their erudition, and exerted the utmost acumen of their genius; and, without entering into unnecessary detail, it will be sufficient for us if,

* See Herodotus, Clio, cap. 78, *et seq.;* Diod. Sic. lib. ii. p. 120, 121; Strabo. lib. xvi. p. 738.

with the latter, we take the stade at 500 English feet, which is the result of his investigation in the second section of his work. But even on this reduced scale, he considers the numbers in Herodotus as beyond all rational belief, and thinks it safer to adopt the account of Diodorus, which states the circumference of the exterior walls at 360 stadia, and gives to the space inclosed an area of between 70 and 80 square miles. Still he judiciously contends, that this area could never have been filled up with houses closely built, and fully stocked with inhabitants, as European cities are; but must have been laid out in the way in which most Asiatic cities are planned—in large gardens, public squares, and reservoirs of water, and inhabited by a population very disproportionate to so vast an inclosure. Nature herself has fixed boundaries to the extent of great capitals. The wants of a people as numerous as such limits would admit (amounting to some millions) could not be provided for in a situation like that of Babylon, which could command no supplies by sea, and was neither acquainted with the best modes of land conveyance, nor possessed any very commodious inland navigation. Consequently the price of provisions and necessaries of all kinds must, in such a place, have been raised to an extravagant pitch, and that price, increasing with the increasing multitude of inhabitants, must have given birth to incalculable evils*.

The reader has now been presented with a slight sketch of what the magnificent city of Babylon *was* in its meridian splendour—that city, the actual founder of which (if it was not Nimrod, sometimes denominated Belus) is not known, but which, according to history, was enlarged by Semiramis, and still farther enlarged, adorned, and fortified, by Nebuchadnezzar. So vast a prodigy as Babylon in ruins, which was its state so early as the period in which the Parthian monarchy was in the zenith of its glory, could not fail of attracting the attention of the scientific travel-

* D'Anville's Euphrates and Tigris, p. 18; and Rennel on the Geography of Herodotus, p. 338.

ler. To omit more ancient visitors of the scene of these renowned ruins, in 1574, RAUWOLF, a German physician, went to explore them; and, imagining that he had found them at Felugia, a town on the Euphrates, two days' journey above Hella, he with great confidence points out the bridge, with its *arches*, (which could not be used in its construction—the Babylonians having been ignorant of the ARCH, and no traces of it being to be found at Hella), the Palace, and the Tower of Babel, and other distinguished monuments of its former grandeur. The next traveller into these parts, with the same view, was PIETRO DELLA VALLE, who, in 1616, examined them more minutely and leisurely, at the place where Eastern tradition had for ages fixed them—at and near *Hella*, and in the district expressly called Babel. His account is interesting and instructive, and he has the merit of having established, as far as the distance and devastation of time will admit of proof, the fact of these ruins being at least a part of the actual remains of the great city.

"In the midst of a vast and level plain," says this writer, "about a quarter of a league from the Euphrates, appears a heap of ruined buildings, like a *huge mountain*, the materials of which are so confounded together, that one knows not what to make of it. Its figure is square, and it rises in form of a tower or pyramid, with four fronts, which answer to the four quarters of the compass, but it seems longer from north to south than from east to west, and is, as far as I could judge by my pacing it, a large quarter of a league. Its situation and form correspond with that pyramid which Strabo calls the tower of Belus."······"The height of this *mountain of ruins* is not in every part equal, but exceeds the highest palace in Naples; it is a mis-shapen mass, wherein there is no appearance of regularity; in some places it rises in sharp points, craggy, and inaccessible; in others it is smoother and of easier ascent; there are also traces of torrents from the summit to the base, caused by violent rains."·········· "It is built with large and thick bricks, as I carefully observed, having caused excavations to be made in several places for that purpose; but they do not appear to have been burned, but dried in the sun, which is extremely hot in those parts. These sun-baked bricks, in whose substance were mixed bruised *reeds* and *straw*, and which were laid in clay mortar, compose the great mass of the building, but other bricks were also perceived at certain intervals, especially where the strongest buttresses stood, of the same size, but burned in the kiln, and set in good lime and bitumen*."

---

* Della Valle's Travels, vol. ii. let. 17.

This amazing pile, which resembles the mighty tower in question in so many points as scarcely to leave a doubt in the mind of its being the identical one described by Herodotus, and other classical writers of antiquity, is known to the natives, according to Mr. Rich, (p. 28 of this Memoir) by the name of MUJELIBE, meaning *overturned*, as the Eastern writers say Babel was by a tempest from Heaven. From Della Valle's discovery and description of it, it is generally called Della Valle's Ruin, which the reader will please to bear in mind, as it will frequently be so denominated in the course of this extended investigation.

The next traveller to the banks of the Euphrates was M. Niebuhr, and from that gentleman's acknowledged erudition, and his acuteness in examining subjects of Asiatic antiquity, it is to be regretted that he passed so rapidly, in his route to Bagdad, through those celebrated remains of Babylonian grandeur. It is well known, however, with how many obstacles, from the jealous suspicion as well as open hostility of the present possessors of those renowned regions, the European traveller, when unattended by a proper escort, has to contend. Such was the case with the learned Dane, whose description of the ruins is of a very general nature; although he confirms all that Della Valle has related respecting the immensity of the piles of ruin scattered over the wide plain of Hella, and the continual excavation of the ground for the bricks, of *a foot square*, which formed the foundation of the walls and structures of ancient Babylon. These, it has been observed, are on the Eastern side of the river; but Niebuhr also mentions a stupendous fabric* which he visited, about six miles below Hella, on the western side, called by the natives *Birs Nemroud.* Apprehensions of danger from the menacing Arabs who watched him, prevented his taking the dimensions of this hitherto little noticed mass of ruins, denominated, by the Jews settled in the neighbour-

* Niebuhr's Travels, vol. ii. p. 236.

hood, the prison of Nebuchadnezzar; but more probably, as D'Anville observes, his Palace. What, however, he was then prevented from doing, has since been effectually done by Mr. Rich, and our regret is in consequence proportionably diminished. We shall give an ample extract from that portion of his Memoir which describes this mighty ruin.

M. Otter, like Niebuhr, passed through this country too hastily to make any minute and accurate personal observations on the remaining monuments of Assyrian pride; but he was informed, that, amidst the woods and coppices which now envelope the site of Babylon, vast remains of walls and edifices were to be traced, and thinks it not improbable that some of these very woods, so abundantly dispersed over the grounds and preserved from age to age upon the same spot, may be the remains of the celebrated *Hanging Gardens* mentioned by Diodorus and Strabo*. To this it may be added, that Hella is at this day celebrated for the extent and beauty of its gardens†.

Whatever comes from the pen of so great a geographer as D'Anville, deserves respectful attention, and on that account, rather than from any clearness of description in the narrative itself, it is proper to mention the manuscript of Père Emanuel, inserted in his *Euphrates and Tigris* at pages 116, 117, &c. giving an account of a vast ruin seen by that missionary on the western side of the river, the bricks composing which were of such a solid substance, and so closely compacted, that it was scarcely possible to detach them from the mass to which they were united. This was undoubtedly the *Birs Nemroud*, above alluded to, and so far the account is valuable; but it is accompanied with no detailed particulars with respect either to its extent or to its elevation.

The last account of these ruins that appeared in print, previously to this by Mr. Rich, is that by M. Beauchamp, who, in his distinguished

---

* Otter's Travels, vol. ii. p. 211. † Rich's Memoir, p. 12.

office of Vicar General of Babylon, had frequent opportunities of visiting and examining them. His account was given to the public in the European Magazine for May, 1799, being a translation from the French original, and is more minute and satisfactory than any preceding one as to the situation of the ruins and the materials of which they are composed. Speaking of Della Valle's ruin, he says it could never have been supposed to be the work of human hands, had it not been proved to be so by the layers of bricks, in regular order, burned in the fire, cemented with *bitumen*, and intermixed with *osiers*. He observed, impressed on most of them, the unknown characters already mentioned. He confirms all that Diodorus reports concerning the sculptured animals on the walls, and the paintings on the bricks, in the following remarkable passage: "This place and the Mount of Babel adjoining are commonly called by the Arabs *Makloube*, that is, topsy-turvy," (the Mujelibè of Mr. Rich). "I was informed by the master mason employed to dig for bricks, that the places from which he procured them were large thick walls, and sometimes spacious chambers. He has frequently found in them earthen vessels, engraved marbles, and about eight years ago a statue as large as life, which he threw back amongst the rubbish. On one wall of a chamber he found the figures *of a cow, and of the sun and moon*," (objects sacred in the astronómical worship of both Egypt and Babylon,) "*formed of varnished bricks*. Sometimes idols of clay are found, representing human figures. I found one brick on which was a *Lion* (the zodiacal lion,) and on others a *half moon* in relief*." The same master mason took him to a place, where the wall, built of the same furnace-baked bricks, appeared to have been *sixty feet* thick; what an inexhaustible source of materials for the Arabian architect! In another place he found a subterranean canal, which, instead of being *arched* over, was covered with

* Europ. Mag. May, 1792.

massy flat pieces of sand-stone, six or seven feet long, by three wide. He concludes thus: "These ruins extend several leagues to the north of Hella, and incontestibly mark the situation of Ancient Babylon*."

We come at length, after this extensive range through preceding history and prior description ancient and modern, to the more recent survey of Babylon by the author before us.

The residence of Mr. Rich at the court of Bagdad, and the powerful protection of the Pasha, could not but afford him every facility for that comprehensive investigation, of which he desires us to consider the present essay as only the precursor. He commences the essay by declaring that he means to refrain from all idle conjecture, and to adhere to facts alone; to relate only what he saw, and in the order in which he saw it. He describes the whole country between Bagdad and Hella, a distance of 48 miles, as a perfectly flat and, for the most part, uncultivated waste; though it is evident, from the number of canals by which it is traversed, and the immense ruins that cover its surface, that it must formerly have been both well peopled and cultivated. For the accommodation of the traveller, at convenient distances throughout the whole track, there have been erected *khans* or *caravanserais*, and to each is attached a small village. About two miles above Hella, the more prominent ruins commence, among which, at intervals, are discovered, in considerable quantities, *burnt* and *unburnt bricks* and *bitumen;* two vast mounds in particular attract attention from their size, and these are situated on the eastern bank of the Euphrates. There are scarcely any remains of ruins visible, immediately opposite on the western bank, but there are some of a stupendous magnitude on that side, about six miles to the south-west of Hella, which will be noticed hereafter.

The first grand mass of ruins Mr. Rich describes as

* Europ. Mag. May, 1792.

"Extending one thousand one hundred yards in length, and eight hundred in its greatest breadth, its figure nearly resembling that of a quadrant; its height is irregular; but the most elevated part may be about fifty or sixty feet above the level of the plain, and it has been dug into for the purpose of procuring bricks."

He distinguishes this mound, on which is erected a tomb, sacred to a son of Ali, named AMRAN, though he controverts the fact of Ali having had a son so called, by the name of AMRAN. He then proceeds:

"On the north is a valley of five hundred and fifty yards in length, the area of which is covered with tussocks of rank grass, and crossed by a line of ruins of very little elevation. To this succeeds the second grand heap of ruins, the shape of which is nearly a square, of seven hundred yards length and breadth, and its S. W. angle is connected with the N. W. angle of the mounds of Amran, by a ridge of considerable height, and nearly one hundred yards in breadth. This is the place where Beauchamp made his observations, and it is certainly the most interesting part of the ruins of Babylon; every vestige discoverable in it declares it to have been composed of buildings far superior to all the rest which have left traces in the eastern quarter: the bricks are of the finest description; and, notwithstanding this is the grand storehouse of them, and that the greatest supplies have been and are now constantly drawn from it, they appear still to be abundant. But the operation of extracting the bricks has caused great confusion, and contributed much to increase the difficulty of decyphering the original design of this mound, as in search of them the workmen pierce into it in every direction, hollowing out deep ravines and pits, and throwing up the rubbish in heaps on the surface. In some places they have bored into the solid mass, forming winding caverns and subterranean passages, which, from their being left without adequate support, frequently bury the workmen in the rubbish. In all these excavations, walls of burnt brick laid in lime mortar of a very good quality are seen; and in addition to the substances generally strewed on the surfaces of all these mounds, we here find fragments of *alabaster vessels, fine earthen ware, marble, and great quantities of varnished tiles, the glazing and colouring of which are surprisingly fresh.* In a hollow near the southern part I found a sepulchral urn of earthen ware, which had been broken in digging, and near it lay some human bones which pulverized with the touch.

"To be more particular in my description of this mound, not more than two hundred yards from its northern extremity is a ravine, hollowed out by those who dig for bricks, in length near a hundred yards, and thirty feet wide by forty or fifty deep. On one side of it a few yards of wall remain standing, the face of which is very clean and perfect, and it appears to have been the front of some building. The opposite side is so confused a mass of rubbish, that it should seem the ravine had been worked through a solid building. Under the foundations at the southern end an opening is made, which discovers a subterranean passage, floored and walled with large bricks laid in bitumen, and covered over with pieces of sand stone, a yard thick and several yards long, on which the whole pressure is so great as to have given a considerable degree of obliquity to the side walls of the passage. It is half full of brackish water (probably rain water impregnated with nitre, in filtering through the ruins, which are all very productive

of it) and the workmen say that some way on it is high enough for a horseman to pass upright: as much as I saw of it, it was near seven feet in height, and its course to the south. This is described by Beauchamp, who most unaccountably imagines it must have been part of the city wall. The superstructure over the passage is cemented with bitumen, other parts of the ravine with mortar, and the bricks have all *writing on them*. The northern end of the ravine appears to have been crossed by an extremely thick wall of yellowish brick, cemented with a brilliant white mortar, which has been broken through in hollowing it out: and a little to the north of it I discovered what Beauchamp saw imperfectly, and understood from the natives to be an idol. I was told the same thing, and that it was discovered by an old Arab in digging, but that, not knowing what to do with it, he covered it up again*. On sending for the old man, who pointed out the spot, I set a number of men to work, who, after a day's hard labour, laid open enough of the statue to show that it was *a lion of colossal dimensions*, standing on a pedestal, of a coarse kind of grey granite and of rude workmanship; in the mouth was a circular aperture, into which a man might introduce his fist."—pp. 21—25.

The next considerable mass to that of Amran is the Kasr, or Palace, as it is called by the natives, and it is thus described:

"It is a very remarkable ruin, which, being uncovered and in part detached from the rubbish, is visible from a considerable distance, but so surprisingly fresh in its appearance, that it was only after a minute inspection I was satisfied of its being in reality a Babylonian remain. It consists of several walls and piers *(which face the cardinal points)* eight feet in thickness, in some places ornamented with niches, and in others strengthened by pilasters and buttresses, built of fine burnt brick, (still perfectly clean and sharp) laid in lime cement of such tenacity, that those whose business it is have given up working, on account of the extreme difficulty of extracting them whole. The tops of these walls are broken, and may have been much higher. On the outside they have in some places been cleared nearly to the foundations, but the internal spaces formed by them are yet filled with rubbish, in some parts almost to their summit. One part of the wall has been split into three parts, and overthrown as if by an earthquake; some detached walls of the same kind, standing at different distances, show what remains to have been only a small part of the original fabric; indeed it appears that the passage in the ravine, together with the wall which crosses its upper end, were connected with it. There are some hollows underneath, in which several persons have lost their lives; so that no one will now venture into them, and their entrances have now become choked up with rubbish. Near this ruin is a heap of rubbish, the sides of which are curiously streaked by the alternation of its materials, the chief part of which, it is probable, was unburnt brick, of which I found a small quantity in the neighbourhood, but no reeds were discoverable in the interstices."—p. 25.

---

* It is probable that many fragments of antiquity, especially of the larger kind, are lost in this manner. The inhabitants call all stones with inscriptions or figures on them, *Idols*.

The third and last ruin described in this eastern division, is that of Della Valle, so often alluded to above; and we think it too curious to be omitted, although Mr. Rich seems rather disinclined to adopt the opinion of its actually being the remains of the Tower of Belus.

"A mile to the north of the Kasr, or full five miles distant from Hella, and nine hundred and fifty yards from the river bank, is the last ruin of this series, which has been described by Pietro Della Valle, who determines it to have been the Tower of Belus, an opinion adopted by Rennel. The natives call it Mukallibe, or, according to the vulgar Arab pronunciation of these parts, Mujelibè, meaning overturned; they sometimes also apply this term to the mounds of the Kasr. It is of an oblong shape, irregular in its height and the measurement of its sides, *which face the cardinal points*; the northern side being two hundred yards in length, the southern two hundred and nineteen, the eastern one hundred and eighty-two, and the western one hundred and thirty-six; the elevation of the S.E. or highest angle, one hundred and forty-one feet. The western face, which is the least elevated, is the most interesting, on account of the appearance of building it presents. Near the summit of it appears a low wall, with interruptions, built of unburnt bricks, mixed up with chopped straw or reeds, and cemented with clay-mortar of great thickness, having between every layer a layer of reeds: and on the north side are also some vestiges of a similar construction. The S. W. angle is crowned by something like a turret or lanthern: the other angles are in a less perfect state, but may originally have been ornamented in a similar manner. The western face is lowest and easiest of ascent, the northern the most difficult. All are worn into furrows by the weather; and in some places, where several channels of rain have united together, these furrows are of great depth, and penetrate a considerable way into the mound. The summit is covered with heaps of rubbish, in digging into some of which, layers of broken burnt brick, cemented with mortar, are discovered, and whole bricks, with inscriptions on them, are here and there found; the whole is covered with innumerable fragments of pottery, brick, bitumen, pebbles, vitrified brick or scoria, and even shells, bits of glass, and mother-of-pearl."—p. 28.

Mr. Rich, having now finished his observations on the ruins of the east bank of the Euphrates, enters upon the examination of what, on the opposite west bank, have been by some travellers supposed (and their suppositions have been adopted by Major Rennel) to be the remains of this great city. Those, however, which Mr. Rich describes, are of the most trifling kind, scarcely exceeding one hundred yards in extent, and wholly consisting of two or three insignificant mounds of earth, overgrown with rank grass. The country too being marshy, he doubts the *possibility* of there having been any buildings of any magnitude ever erected in that spot, and much less, buildings of the astonishing dimensions of those described by

the classical writers of antiquity. He then opens to our view a new and almost unexplored remain of ancient grandeur, in the following passage, with which, and a few subsequent remarks, we shall conclude our extracts from this interesting little volume, in full expectation of being enabled hereafter to view the subject with many new lights thrown upon it.

"But although there are no ruins in the immediate vicinity of the river, by far the most stupendous and surprising mass of all the remains of Babylon is situated in this desert, about six miles to the S. W. of Hella. It is called by the Arabs *Birs Nemroud*, by the Jews *Nebuchadnezzar's Prison*, and has been described both by Père Emanuel and Niebuhr, (who was prevented from inspecting it closely by fear of the Arabs,) but I believe it has not been noticed by any other traveller. Rennel, on the authority of D'Anville, admits Père Emanuel's ruin into the limits of Babylon, but excludes Niebuhr's, which he says cannot be supposed to have been less than two or three miles from the S. W. angle of the city. No one who had not actually examined the spot could ever imagine them, in fact, to be one and the same ruin.

"I visited the Birs under circumstances peculiarly favorable to the grandeur of its effect. The morning was at first stormy, and threatened a severe fall of rain; but as we approached the object of our journey, the heavy clouds separating discovered the Birs frowning over the plain, and presenting the appearance of a circular hill crowned by a tower, with a high ridge extending along the foot of it. Its being entirely concealed from our view during the first part of our ride, prevented our acquiring the gradual idea, in general so prejudicial to effect, and so particularly lamented by those who visit the Pyramids. Just as we were within proper distance, it burst at once upon our sight, in the midst of rolling masses of thick black clouds, partially obscured by that kind of haze whose indistinctness is one great cause of sublimity, whilst a few strong catches of stormy light, thrown upon the desert in the back ground, serve to give some idea of the immense extent and dreary solitude of the wastes in which this venerable ruin stands.

"The Birs Nemroud is a mound of an oblong figure, the total circumference of which is seven hundred and sixty-two yards. At the eastern side it is cloven by a deep furrow, and is not more than fifty or sixty feet high; but at the western it rises in a conical figure to the elevation of one hundred and ninety-eight feet, and on its summit is a solid pile of brick, thirty-seven feet high by twenty-eight in breadth, diminishing in thickness to the top, which is broken and irregular, and rent by a large fissure extending through a third of its height. It is perforated by small square holes disposed in rhomboids. The fine *burnt bricks of which it is built have inscriptions on them;* and so admirable is the cement, which appears to be lime-mortar, that, though the layers are so close together that it is difficult to discern what substance is between them, it is nearly impossible to extract one of the bricks whole. The other parts of the summit of this hill are occupied by immense fragments of brick work of no determinate figure, tumbled together and converted into *solid vitrified masses,* as if they had undergone the action of the fiercest fire, or been blown up with gunpowder, the layers of the bricks perfectly discernible,—a curious fact, and one for which I am utterly incapable of accounting. These, in-

credible as it may seem, are actually the ruins spoken of by Père Emanuel, who takes no sort of notice of the prodigious mound on which they are elevated.

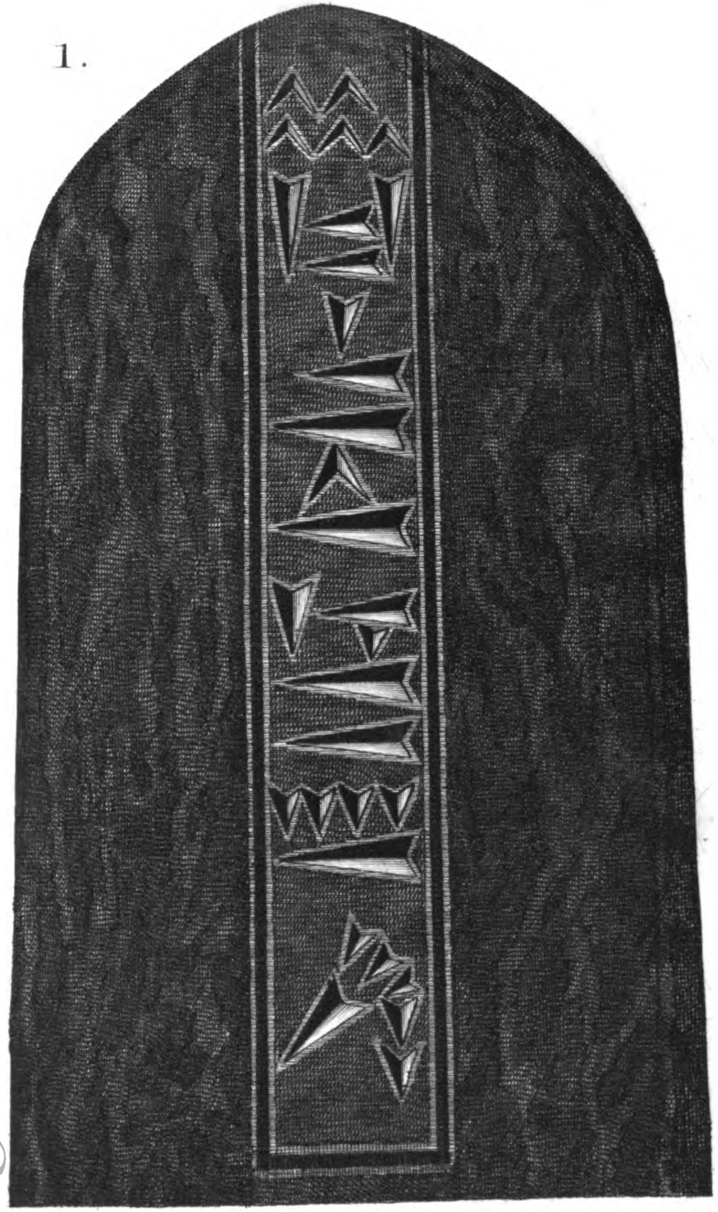
" It is almost needless to observe that the whole of this mound is itself a ruin, channelled by the weather and strewed with the usual fragments, and with pieces of black stone, sand stone, and marble. In the eastern part layers of unburnt brick are plainly to be seen, but no reeds were discernible in any part: possibly the absence of them here, when they are so generally seen under similar circumstances, may be an argument of the superior antiquity of the ruin. In the north side may be seen traces of building, exactly similar to the brick-pile. At the foot of the mound a step may be traced, scarcely elevated above the plain, exceeding in extent by several feet each way the true or measured base; and there is a quadrangular inclosure round the whole, as at the Mujelibè, but much more perfect and of greater dimensions. At a trifling distance from the Birs, and parallel with its eastern face, is a mound not inferior to that of the Kasr in elevation, but much longer than it is broad. On the top of it are two Koubbès, or oratories, one called Makam Ibrahim Khalil, and said to be the place where Ibrahim was thrown into the fire, by order of Nemroud, who surveyed the scene from the Birs; the other, which is in ruins, Makam Saheb Zeman; but to what part of Mehdy's life it relates I am ignorant. In the oratories I searched in vain for the inscriptions mentioned by Niebuhr; near that of Ibrahim Khalil is a small excavation into the mound, which merits no attention; but the mound itself is curious from its position, and correspondence with others, as I shall in the sequel have occasion to remark.

" Round the Birs are traces of ruins to a considerable extent. To the north is the canal which supplies Mesjid Ali with water, which was dug at the expense of the Nuwaub Shujahed Doulah, and called after his country Hindia. We were informed that, from the summit of the Birs, in a clear morning, the gilt dome of Mesjid Ali might be seen."—pp. 34—38.

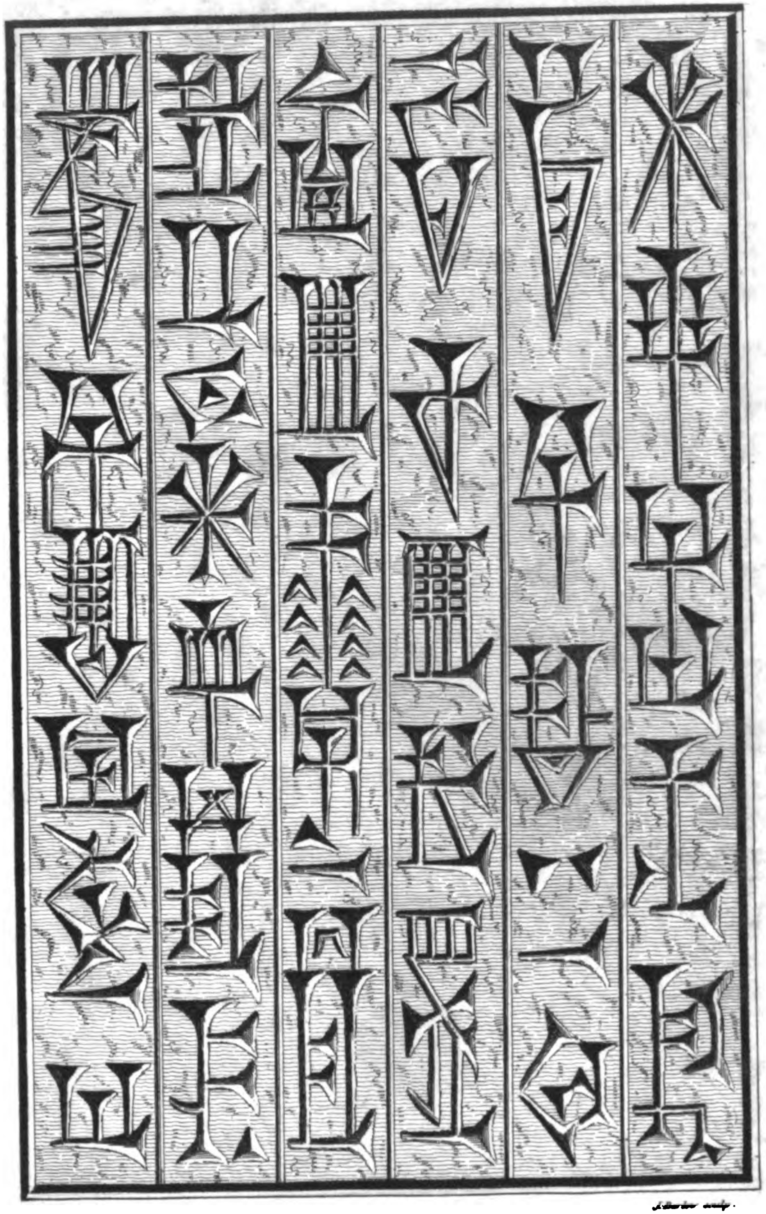
The result of the preceding cursory survey of the proudest remaining monuments of Asiatic antiquity, seems to be, that, although we have doubtless ascertained the *site*, and from evidence both external and internal many of the public *edifices*, of Babylon: yet the *actual extent* of the circumference of that great city, from the varying accounts of the ancient historians, remains still disputable, and must ever do so, unless the vestiges of its vast walls shall hereafter be accurately traced by still more assiduous local research. If the *Birs* and *Della Valle's ruin*, so very distant, were ever included in its walls, the mensurations assigned by the Father of History must be resorted to, however apparently incredible, to solve the difficulty; and Herodotus will thereby obtain a new and unfading laurel. In our present state of doubt and uncertainty, and until Mr. Rich shall favour us with the result of those more extended investigations designed by

him, it will be safest for us to coincide in the rational conjecture of some able geographers, that those enormous lines of demarcation were intended rather to designate the bounds of the *District*, than of the *City, of Babylon.* Indeed, on the supposition that the circumference of those walls was enlarged by Nebuchadnezzar, there was the most urgent reason for that *district* to be well fortified, as well against the ferocious hordes of wild Arabs that hung over it on the western quarter, as the more formidable armies of the Medes and Persians on the north and eastern limits, who, about that period, were widely extending their conquests in Asia, and under Cyrus, only a few years afterwards, about A.D. 536, actually conquered Babylon itself, and put an end for ever to the Assyrian dynasty.

1.



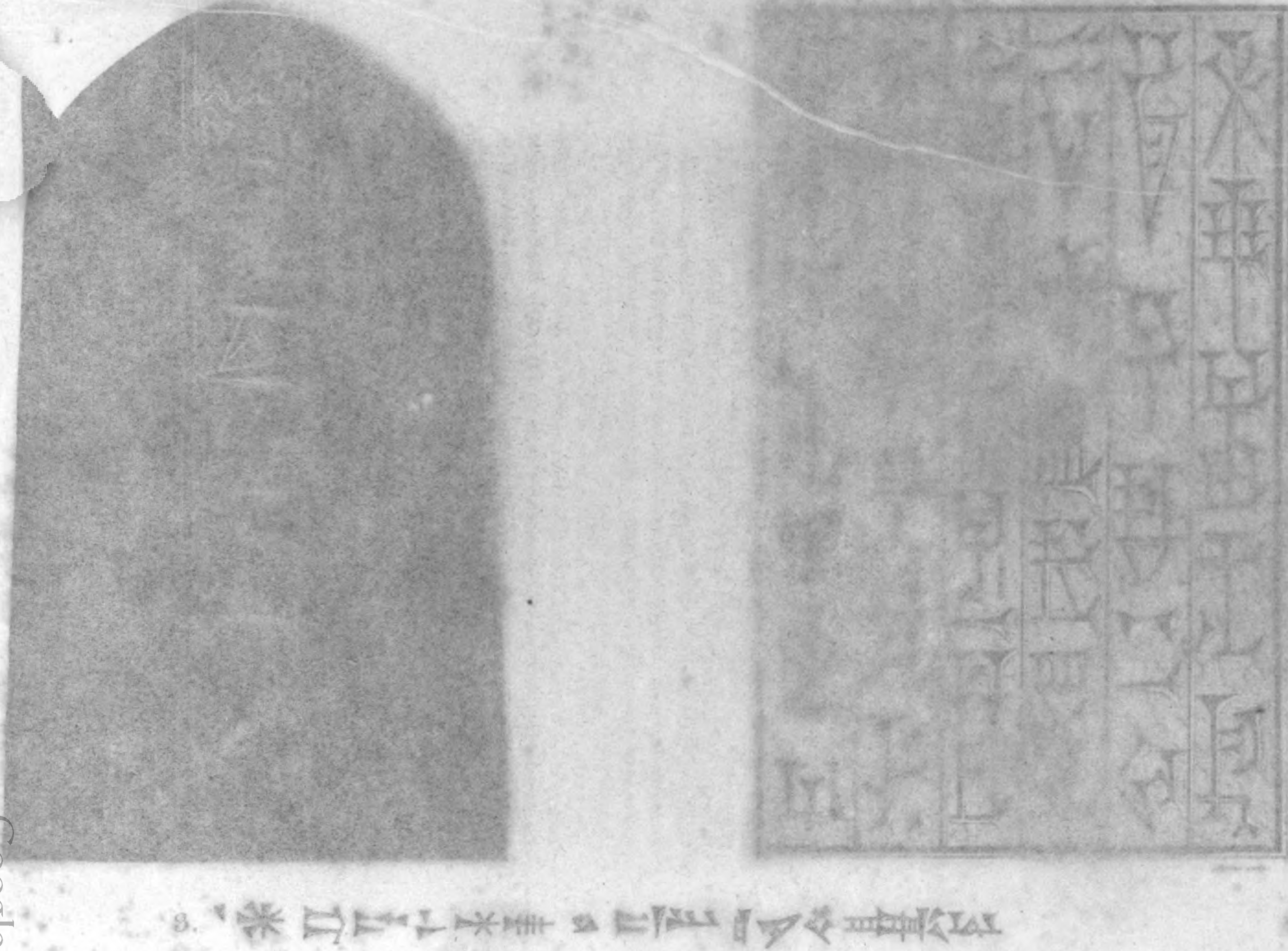
2.



3.



1. *Ancient Inscription on the Walls of Persepolis.* 2. *Ancient Inscription on a Babylonian Brick preserved in the British Museum.* 3. *Persepolitan Characters engraved by Raspe from an oriental Jasper.*



1. Ancient Inscription on the Walls of Persepolis. 2. Ancient Inscription on a Babylonian Brick preserved in the British Museum. 3. Persepolitan Characters engraved by Raspe from an oriental Jasper.

SECTION II.

The argument,—whether the CHALDÆANS *or the* EGYPTIANS *were the elder race of astronomers; greatly in favour of the former from their vicinity to the spot whereon the ark rested.—The account sent to Aristotle by Callisthenes, from Babylon, when taken by Alexander, remarkably consonant to historical fact.—Strictures on the asserted proficiency of the ante-diluvians in astronomical science.—The sandy deserts of Chaldæa and Arabia travelled over, before the sea was navigated,* BY THE STARS.*—The constellations mentioned in the book of* JOB.*—The gross addiction of the Chaldæans in the most ancient periods to the Sabian superstition, proved from the dreadful denunciations of Scripture against that idolatrous race.—The great cities, both of* BABYLON *and* ECBATANA, *constructed upon a plan connected with astronomy.—Decided proofs of this fact adduced from Herodotus and Diodorus Siculus. The tower of Belus, therefore, a* TEMPLE TO THE SUN, *and its lofty summit used as an* OBSERVATORY;*—higher than the great pyramid of Egypt.—Modern accounts of the* BABYLONIAN BRICKS, *painted and adorned with figures, accurately correspondent to the description of them by Diodorus.—The images and the unknown characters inscribed upon them probably have reference to astronomical details—High advance of the Babylonians in* METALLURGIC *and* HYDRAULIC *science—in* MECHANICS*—in* GEOMETRY *—in* ARCHITECTURAL *knowledge, evident in their ability to erect such vast edifices in a swampy soil.—No traces of the* ARCH *to be found amid all the ruins of Babylon—not in the* BRIDGE, *or* SUBTERRANEOUS PASSAGE*—not in the* TEMPLE OF BELUS*—not in the* PENSILE GARDENS*—Strictures on the symbolic sculptured animals, the* LION *and the* BULL, *found in the ruins—on the marked resemblance, in form, between the* TEMPLE OF BELUS *and the great* TEMPLE OF MEXICO, *in America—on the* ORIGIN OF ALPHABETICAL WRITING.*—Concluding reflections.*

IN the preceding section, the reader will please to observe, that I have rather adhered to plain descriptive narration of the wonderful objects there recorded, than indulged in any conjectural hypothesis in respect to the early advance in science of those who fabricated them; for *science* they evince in a high degree, and of various and important kinds. In regard, indeed, to the *colours* laid on the bricks and afterwards *burnt in*, as described by Diodorus, I ventured to

hint that this was nearly the most early specimen of *enamelling* on record, and that their acquaintance with *engraving* might also justly be inferred from the characters universally inscribed on those bricks. With a view also to this more extended dissertation on the astronomical proficiency of the Chaldæans, I was careful to mark, in italics, what occasionally occurred in regard to the great SOLAR TEMPLE, as I shall now take the liberty to call it, being built to front *the four cardinal points*, and the *zodiacal figures* sculptured on the walls, as attested by modern travellers. The subject, however, being very curious and important, and connected with the first progress of mankind in the arts, it is my purpose, in the present section, to discuss these interesting topics in considerable detail. Let us begin with considering the astronomy of the Chaldæans.

Whether the Chaldæans, or the Egyptians, were the more ancient race of astronomers, has been a subject of warm debate among the learned in all ages. The former boasted, for the patron of their order, BELUS, the youngest son of Cush, the grandson of Noah, and the supposed founder of the mighty fabric that bears his name. Their vain-glorious historians carried up their astronomical annals to the incredible height, according to Cicero, of four hundred and seventy thousand years. "Babylonios, eos qui, ex Caucaso, cœli signa servantes numeris et motibus stellarum cursus persequntur; qui 470 millia annorum, *ut ipsi dicunt*, monumentis comprehensa continent*." They had in use among them three great cycles; 1st, the SAROS, consisting, according to Abydenus, of 3600 years; the NEROS, of 600 years; and the SOSSOS, of sixty years; all doubtless great exaggerations, and the years probably to be considered as *lunar*

* Cic. de Divinat. lib. i. cap. 19.

years or months only. Indeed, by some ancient chronologers they have been considered as *days* only, the Chaldæan word Jomin, and the Hebrew Jamin, being affirmed to signify either *years* or *days**. The more accurate investigations of the moderns have determined the Chaldæan saros to consist of a period of 223 complete lunations, forming the famous metonic cycle of 19 years, used by the Greeks; but by them undoubtedly borrowed from the Chaldæans. All that we know for any thing like certainty about the matter from antiquity is, that when Alexander conquered Babylon, the Chaldæan priests informed Callisthenes that they had recorded on BRICKS—*coctilibus laterculis inscriptas*, bricks baked in the furnace, a circumstance deserving particular notice in this investigation—astronomical observations that extended back 1903 years before that period, or 330 years before Christ, when that conquest was achieved. This account Callisthenes dispatched from Babylon into Greece to his master and uncle Aristotle, who had requested him to make diligent inquiry upon the subject, and it has been transmitted down to us by Simplicius, who relates it on the authority of Porphyry†.

This statement, if credit may be given to it, carries us back to a period within so few years of the Flood, as plainly to designate the aforesaid Belus, who at that time flourished in Babylon, for the actual founder of the Chaldæan astronomy. The Egyptians, who boasted of Osiris, or Hermes, as the inventor of their astronomical system, and the vast golden circle of Osymandes, one cubit thick, and 365 cubits in circumference, and inscribed with astronomical observations, could not go higher than this æra, and the very early proficiency of both nations in the science in question can only be

* See Syncelli Chronologia, p. 32.

† Vide Simplicius on Aristotle de Cælo, p. 123.

accounted for by the supposition that a considerable portion of the ante-diluvian arts and sciences, among which must be numbered astronomy, engraved on tablets, or treasured in the breasts of Noah and his offspring, was, by the permission of Providence, preserved to illumine the ignorance and darkness of the earliest post-diluvian ages. To suppose, indeed, that our ante-diluvian ancestors were indifferent to the study of that exalted science, which is the source of such sublime delight to many of their posterity; that for sixteen hundred years together they could be uninterested spectators of the celestial bodies, performing with undeviating regularity their vast revolutions; would be an insult to their memories, and to imagine them destitute of the passions and ardent curiosity natural to man. Though we may not give implicit credit to all that Josephus, in the vanity of aggrandizing the progenitors of the Jewish race, has narrated on this head, concerning the two pillars of Seth, the one of BRICK, the other of STONE, erected in the land of Siriad, and inscribed with the principles of ante-diluvian arts and sciences, the latter of which he asserts remained standing in his time*; yet, that he might have gleaned from the traditions of his nation some fragments of authentic information relative to their high advance in science, can hardly be disputed. Among these may be enumerated the grand cycle of 600 years, which he mentions to have been in use among that primitive race in their astronomical calculations. By this cycle of 600 years, Josephus is supposed to have meant the period wherein the sun and moon return to the same situation in the heavens in which they were at the commencement of that cycle; and a remark of the great astronomer Cassini upon it is highly deserving of notice. He ob-

---

* Vide Josephi Antiq. Judaic. lib. i. cap. 3.

serves, that this grand period, of which no intimation is found in the remaining monuments of any other nation, is the finest period that ever was invented, since it brings out the solar year more exactly than that of Hipparchus and Ptolemy, and the lunar month within about one second of what it is determined by modern astronomers. If, he adds, the ante-diluvians really had such a period of 600 years, they must have known the motions of the sun and moon more accurately than they were known some ages after the Flood. Of this there can be no doubt, since the observations of persons who lived eight or nine hundred years, and made by the same vigilant eye, could not fail of being less interrupted and less desultory than those made by men whose lives were contracted within a very small portion of that period, and whose observations were transmitted down through that lengthened term by means of successive observers. In the course of such a prolonged life, one diligent astronomer might have observed Saturn go through more than twenty of his revolutions; and knowledge, thus gradually advancing, might rapidly arrive at excellence little short of perfection*.

Leaving, however, Josephus and the ante-diluvians out of the question, Chaldæa being nearer to the spot where the ark rested, it is natural to suppose its inhabitants were, earliest of their post-diluvian brethren, occupied under a serene and beautiful sky, in exploring the paths and calculating the periods of the heavenly bodies. The diligent observation of the periods of their rising and setting was absolutely necessary to them in their agricultural pursuits, that they might know, for a certainty,

——— Quo sydere terram
Vertere. VIRG.

* Consult Long's Astronomy, vol. ii. p. 395, in which Cassini is quoted at length.

It was also important to them, in travelling over the vast sandy and level plains of their own country and Arabia, to have a celestial guide to direct their way over those pathless deserts, and to this use the constellations were probably applied long before the Phœnician mariner by their aid ploughed the more perilous ocean. Diodorus*, indeed, expressly affirms, that the southern part of Arabia being composed of sandy plains of immense extent, in journeying through them, travellers directed their course ἀπὸ τῶν Ἄρκτων, *by the bears*, in the same manner as navigators guide their vessels at sea. Œdipus, also, in his fatal journey from Corinth to Thebes, says, he travelled on, exploring his way through unknown regions, *by the stars*.

——————— τὴν Κορινθίαν
ἌΣΤΡΟΙΣ τὸ λοιπὸν ἐκμετρούμενος χθόνα
Ἔφευγον.

Œdip. Tyrann. Act ii. line 795, edit. Brunck.

Of the precise æra at which astronomy was applied by the Phœnicians to navigation, it is impossible to speak. At the period when Solomon flourished, which was about one thousand years before Christ, they were already expert mariners, and assisted in navigating his vessels in their voyage to Ophir. In consequence of greater precision being necessary in marine than in land expeditions, they are supposed, in a very early age, but not easily to be ascertained, to have formed into a constellation the stars of the lesser bear, often called from them, Phœnice. The brilliant and steady light shed by the pole star, which is situated in the centre of the arctic circle, was their unerring guide in their distant and dangerous voyages to

* Diodorus Sic. lib. i. p. 156, edit. Rhodoman.

the Cassiterides and other remote regions. But our concern is properly with the Chaldæans.

However dreary and inhospitable to travellers were the vast deserts above mentioned, those wide and open plains, affording an extensive and uninterrupted view of the horizon, especially when taken from such a stupendous elevation as the tower in question, were by those ancient astronomers esteemed the most eligible spots for making observations. In the infant state of that science, when as yet no regular calendar was formed, the length of the year not accurately ascertained, nor that year itself properly divided, it was only by strict attention to the rising and setting of certain constellations, as above intimated, that they discovered the proper seasons for cultivating the earth, in order that they might reap, in due time, its various and abundant produce. Conformably to this practice, Hesiod, the oldest writer on husbandry, recommends the husbandman to reap and plough by the *rising and setting of the Pleiades*, and to prune his vines by the *rising of Arcturus**. In this innocent and primitive practice they were encouraged by the express declaration of holy writ, that the luminaries of heaven were appointed to them for *signs, and for seasons, and for days, and for years*, Gen. i. 14; and happy would it have been for mankind had they adhered to that simple practice, without a criminal deviation into forbidden paths. They were dazzled and deluded by their lustre and their beauty; and adored, instead of observing. They paid their devotions to the orb of created light, instead of the Source of light; they prostrated themselves before the sun, in the place of that Divine Being, who, as

* Hesiod, Opera et Dies, line 384.

the psalmist sublimely expresses himself, *in* SOLE *posuit tabernaculum suum*, had placed his throne in the SUN, Psalm xix. 4.

From this central region of Chaldæa, from this contaminated plain of Shinar, gradually flowed that torrent of idolatrous worship which, in a short time, inundated *nearly* all the nations of the world. The names of the deities were changed, but the objects were still the same; the sun, the moon, and the glittering host of heaven! From Chaldæa, I say, rather than from Egypt, though a land sufficiently polluted by idolatry of the grossest kind—an idolatry peculiar to itself —since they rendered divine honours even to beasts and reptiles, at which the good sense and feeling of mankind in general revolted—from the plain of Shinar, because we are told, that *from thence did the Lord scatter them abroad upon the face of all the earth*, Gen. xi. 9. In whatever region of that earth this infatuated race of *ignicolists* took up their abode, the sacred fire immediately began to burn, and the obelisk and the pyramid shot up to the honour of the Solar Deity and the Queen of Heaven.

In the prophetic portions of scripture, which is always more or less illustrative of ancient habits and manners, we shall find reiterated allusions to the prevailing insanity of this part of Asia. The Almighty, as the most *terrible judgment* possible to be inflicted upon a nation so grossly addicted on all occasions to astronomical superstition as were the Babylonians, frequently threatens them that he will *make the stars dark*, Ezekiel xxxii. 7; and *that the stars of heaven, and the* CHESILIM, *shall not give their light*, Isaiah, xiii. 10. By CHESILIM are generally supposed to be meant the BEARS, the most brilliant and conspicuous group in the northern hemisphere.

But the divine denunciation sometimes goes farther than this. For, as the SUN and MOON were the principal objects of their devotion, he tells them, that *the sun shall be darkened in his going forth, and the*

moon shall not cause her light to shine, Isaiah xiii. 10; and in another place, *I will cause the sun to go down at noon, and I will darken the earth in the clear day*, Amos viii. 9. To their neighbours, the Persians, who maintained the doctrine of *two principles*, in perpetual opposition, and venerated the sun with equal fervor, though not so grossly, since they refrained from image worship, he speaks a doctrine conformable to the tenets of their superstition, and tells them—the insulted God of Nature tells them—*I form the* LIGHT, *and I create* DARKNESS; *I am the Lord, and there is none else*, Isaiah xlv. 7.

At this remote æra, though not flourishing exactly in the same age, two celebrated persons are particularly noticed in scripture, as, though born and living in the focus of it, yet being unpolluted by the reigning idolatry. These are, ABRAHAM, the son of Terah, himself a fabricator of images, called from him TERAPHIM, yet unable to corrupt his pious son; and the virtuous JOB. These holy men are too much connected with the scene and the subject, in which we are at present engaged, to be passed by without the tribute of our respectful homage. The former was a native of UR, of the Chaldees, a name signifying that FIRE which they worshipped as the supreme divinity, and in which city that worship most vigorously flourished. According to the account of Mr. Rich in this Memoir, he was by the order of Nimrod thrown into a fiery furnace, out of which he came unhurt; and, according to a tradition among the natives, it was from his palace of the *Birs Nemroud* that the tyrant viewed, appalled, the stupendous miracle! The latter flourished in princely splendour at Uz, on the confines of Idumæa and Arabia, and was possessed of immense riches in cattle and slaves, the peculiar wealth of the Arabian sovereigns. His exemplary resignation and patience under extreme suffering need not be here insisted upon. He is only mentioned on

account of the sublime book which bears his name, and the testimony which it affords to the unbounded prevalence in that age of the Sabian superstition through Chaldæa and Arabia, in the following beautiful passage, in which he exclaims, *If I beheld the* SUN *when it shined, or the* MOON *walking in brightness, and my heart hath been secretly enticed, or my mouth hath kissed my hand, then should I have denied the God that is above*, Job xxxi. 26. In an astrononical point of view, also, that book is highly important; for if the high antiquity usually assigned to its composition, about 1600 years before Christ, be allowed to it, it will afford no mean additional argument in favour of the Chaldæans being the oldest race of astronomers, that some of the more conspicuous constellations are at that early period enumerated in its pages. These are ARCTURUS, ORION, the PLEIADES, the *crooked serpent* or DRACO, and MAZAROTH or the *zodiacal circle;* and, though the original Hebrew terms may not have been accurately rendered by the translators of the Bible, the allusion to them, and the manner in which they are alluded to, demonstrate that the system was not only already formed, but extensively acted upon. From this early period, and through all succeeding ages, even to the subversion of their empire, the Babylonians seem to have cultivated astronomy with persevering ardour. The college of philosophical priests, as Bailly calls them in his work on the Atalantis of Plato, established in that metropolis, from the winding ascents and the lofty summit of their unrivalled TOWER, besides the labour of classing the constellations, employed themselves in forming that curious portion of oriental astronomy, which, in the ancient History of Hindostan, I have proved was peculiar to them and to the Indians, called the MANSIONS OF THE MOON, (the MANAZIL-AL-KAMAR of the Arabian astronomers,) or the places among the stars in which the

moon takes up her abode during every night of her monthly progress through the heavens*. By this means they obtained that accurate knowledge of her motions, of which the Chaldæan Saros above mentioned was the result, and which is the same with the famous Metonic cycle, comprising a period of nineteen years, of the Greeks. But whether Meto, who flourished so late as 440 years before Christ, had this cycle from the Chaldæans or not, Herodotus expressly says, that *from them* the *Greeks* at an early period learned the use of the *Pole, the Gnomon, and the division of the day into twelve parts*†.

Immersed in these extensive speculations, it was this enlightened race of philosophers, who, 720 years before Christ, hearing of the miracle of the shadow of the sun, their tutelary God, *going back ten degrees on the dial of Ahaz*, sent some of their learned train to Hezekiah, to make inquiry concerning so singular a phænomenon. That

* As my ancient Indian History has been long out of print, and will not probably be soon reprinted, I extract the passage above alluded to, which contains an important quotation from Abulfaragius, for the benefit of the reader who may not be possessed of that work.

"Other phenomena by degrees unfolded themselves to the Chaldaic observers; but the principal object of their attention seems to have been the *moon and its periods:* how incessantly and assiduously they observed her vicissitudes, is evident from the very curious circumstance previously stated, that they possessed a LUNAR ZODIAC, consisting of twenty-eight mansions or houses, in which her orb was supposed by them to reside during the twenty-eight nights of her revolution. It has been remarked that nothing of this kind appears in the Egyptian, and consequently the Grecian, astronomy; and, as the moon's progress through the heavens, from her proximity to the earth, and her rapid motion, was doubtless earliest observed, a fair deduction seems thence to follow, that they were a race of older astronomers. Of this their early proficiency in astronomical as well as other sciences, we have decided evidence in Abulfaragius. —Fuerunt autem, è Chaldæis sapientes, qui amplos progressus fecerunt in variis artium liberalium, scientiarumque mathematicarum et theologicarum, generibus; summè autem excelluerunt in observatione syderum veraque arcanorum cœli indagatione, et insigni naturæ stellarum earumque indiciorum peritia.—*Vide Abulfaragii His. Dynastiarum*, p. 46."

† Herodot. lib. iv. sect. 83.

they were ASTROLOGERS, also, cannot be denied by those who consider how intimately, in those remote periods, the two sciences were connected, both NATURE and MAN being considered by them as under the immediate influence of the celestial orbs; storms, tempests, and all the train of pestilential diseases, were thought to be engendered by their relative situation in the heavens; that is, in the language of astrology, their *opposition* or *conjunction;* success or defeat in war depended upon their fortunate or malignant aspect; even in scripture we are told, the *stars in their courses fought against Sisera;* which, though perhaps only a flight of eastern poetry, still serves to mark the prevalence of the superstition in those early times. The epithets so frequently bestowed by the antient poets on the constellations, designating the influences they were supposed to shed at their rising or setting—their denominating, for instance, ORION, *nimbosus;* the PLEIADES, *pluviales;* or, as expressed by Horace, in the following apposite passage—

> Nec, sævus Arcturi *cadentis*
> Impetus, aut *orientis* Hædi—

afford very ample proof of their addiction to these superstitious vagaries.

From this long train of facts, I think it sufficiently evident, that, in the erection of the tower of Babel, the builders had other ideas besides merely *making themselves a name*, or exalting a *signal*, or *beacon*, which the Hebrew word SEM, and the Greek σημα, derived from it, implies, to prevent their being dispersed or lost, in their hunting excursions, or otherwise, over the vast and trackless wilds of Chaldæa and Arabia. I have not the least intention of impugning the scripture account of its erection, in whichsoever of these senses the word SEM may be understood, but I contend that the more predominant idea

in their minds was to erect a tower of that vast altitude, for the sake of accurately observing the motions of the celestial orbs; that their devotion to the worship of FIRE gave to it its pyramidal form; and that, in fact, the tower of Babel was neither more or less than

A TEMPLE AND HIGH ALTAR TO THE SUN,

erected by an idolatrous race, who had long deserted the temples and altars of the true God. A HIGH ALTAR, indeed, I may with justice denominate it, since on its vast table, according to Herodotus, (Clio, 183,) at the anniversary festival of this God, the Chaldæans regularly consumed *incense to the amount of a thousand talents.*

That the circumstances here stated are not alluded to in scripture cannot be urged as any solid objection to this hypothesis, since Moses was not giving us the history of idolatry in the line of Ham, whose posterity seem to be alone engaged in its iniquitous construction, but of the true religion in the virtuous line of Shem, and seldom engages in historical details concerning any nation, except when by its conduct it becomes connected with that of the Jews. When this same Chaldæan race of idolators, in succeeding periods, became the conquerors and oppressors of the chosen people of God, the anathemas denounced against them and the objects of their worship, as the reader has previously observed, were frequent and terrific. Let us, however, do justice even to these infatuated votaries of the Sabian superstition, for though they paid external homage to the sun, moon, and stars, which they thought to be *eternal*, yet it was not wholly to the material orb itself that their devotion was directed; they supposed them to be animated by intelligent beings, of various rank and powers in the universe, who made those shining spheres their habitation, governed their motions, and guided their influences. To those presiding Genii,

when their orbs were visible, *above*, were their invocations principally addressed; and when invisible, their images, formed of the most precious metals, were with equal fervor adored, *below*. In proof of this, may be adduced the colossal statue of Belus, of solid gold, mentioned by Diodorus as erected on the platform of this temple, and the whole train of subordinate deities, fabricated of gold and various coloured gems, that adorned the walls of the mystic recesses of the Mithratic cavern, as described in the second volume of the Indian Antiquities*.

The learned Bochart, in his Phaleg, has preserved for us several fragments of eastern tradition concerning this tower, as that it was overturned by tempestuous whirlwinds, and that Nimrod, the projector, was buried in its ruins. Josephus cites the well known oracle of the venerable Sybil to the same purpose. The ancient Jewish writers and commentators on the Bible also bear ample testimony to its erection as a temple for idolatrous worship; and the Jerusalem targum in particular asserts, that on the summit was intended to have been placed an image, with a sword in its hand, as a kind of *talisman* for its defence against men and dæmons. Et faciamus nobis IMAGINEM ADORATIONIS in ejus fastigio, et ponamus Gladium in manu ejus, ut conferat contra acies prælium, prius quam dispergamur de superficie terræ.—Targum Hierosol. Certainly, scripture gives no countenance to vagaries like these, but that idolatry gave birth to the project is evident; and the criminal intention may well be inferred from the acknowledged character of the builders.

The concise and simple history of this stupendous undertaking, as given in the Bible, is as follows: It was the divine will that the earth, newly recovered from the waters of the ocean, should be gradually

---

* See Ind. Antiq. vol. ii. sect. 3 and 4.

peopled in all its divisions by the descendants of Noah and his family preserved in the ark. The confederacy formed at Babel was directly subversive of this benign intention of Providence. This was one principal cause of the divine anger, and of the consequent judgement, *the confusion of the lip*, as Mr. Bryant contends it should be rendered, by which it was frustrated. But though Moses is silent in regard to the crime of intended idolatry, it by no means follows that, because it is not mentioned by him, it was not a part, and a weighty part too, of that crime which brought down the vengeance of Heaven. This mad project having proved abortive, and the dispersion of the assembled multitudes having been accomplished through the very means taken to avoid it, viz. their efforts to raise a structure that should serve as a *signal*, or point of re-union, for their scattered tribes, a temporary suspension in its erection took place; but the work begun by Nimrod was completed by his son Belus, not at all reformed by that judgement, according to the original plan, or as nearly as practicable, and so remained for ages an almost indestructible mass of masonry. What was properly called the Temple of Belus, as may be collected from all the classical authorities above enumerated, was an additional pile, erected round it in after times by Semiramis or Nebuchadnezzar, or whoever it was that built, or beautified, or enlarged, the city of Babylon. The tower of observation stood proudly prominent in the centre, the gaze, the wonder, of an admiring world!

The above representation is in a great degree consonant to the account of Herodotus, who visited Babylon and actually saw this tower, standing in decayed glory, about 440 years before the Christian æra. In proof of this, and that I may not appear to give the language of this great historian a forced application, or bend his meaning to the hypothesis here adopted, I shall cite a portion of chap. 181, of his first book, in the words of Mr. Beloe's accurate and elegant transla-

tion. "In the centre of each division of the city, there is a circular space surrounded by a wall; in one of them stands the royal palace, which fills a large and strongly fortified place. The Temple of Jupiter Belus occupies the other, whose huge gates of brass may still be seen. It is a square building, each side of which is of the length of two furlongs. In the midst a TOWER rises of the solid depth and height of one furlong, upon which, resting as a base, *seven* other turrets are built in regular succession. The ascent is on the outside, which, winding from the ground, is continued to the highest tower; and in the middle of the whole structure there is a convenient *resting place*." I consider this tower, in the centre of the square building, as the remains of that identical tower, from which, casting their eyes over an horizon as uninterrupted and almost as boundless as the ocean, the ancient Chaldæans accurately observed the rising and setting of the stars. It was a *temple* within, and an *observatory* without, and nothing was ever better calculated to answer both purposes. The *seven* turrets, rising gradually one above the other, from the ample base, mark the seven planetary deities* to whose honour it was erected; and the *resting-place*, in the middle, was the chosen spot of unwearied and profound philosophical investigation!

That the above statement, in regard to the origin and application of the TOWER in question, is not wholly fanciful or conjectural, may be proved by what Diodorus, from oriental authority, has informed us concerning the *precise* number of furlongs which formed the circumference of the walls of Babylon, and the reason for that precision; as

---

* We may form a proper judgement of the nature of this planetary worship from the practice of the false prophet, Balaam, a priest of Belus, and a native of this same Mesopotamian region, who, not many ages after, when sent for by Balak to curse Israel, said, *Build me here* SEVEN ALTARS, *and prepare me here* SEVEN *young bullocks and* SEVEN *rams;* Numbers xxiii. 1.

well as by that *analogy* to which we must often have reference in doubtful cases; I mean, the analogy between the manners and customs of the Assyrians, and those of the Medes and Persians, their neighbours in Asia. I request the reader's attention to the remarkable facts which I am now about to state.

The original walls of Babylon measured exactly 360 furlongs, the number of the days in the ancient year.

The walls of Babylon were reckoned, by the ancients, for their height, depth, and extent, among the wonders of the world. Herodotus affirms them to have been 200 cubits, or 300 feet, in height; 50 cubits, or 75 feet, thick; and their circumference he states, as before observed, at 480 furlongs; but this we shall presently prove to be a mistake, if the measure be applied to the *original* walls, which were only 360 furlongs in extent, the precise number of the days in the ancient Chaldæan year, before that year was, at a succeeding period, and by more exact computation, *reformed*. Their height was afterwards reduced to 50 cubits, by Darius Hystaspes, in revenge for the rebellion of its inhabitants, who placed their principal dependence on the height and strength of these walls. The reason of my here adopting the account of Diodorus, who states their circumference as 360 furlongs *only*, and expressly asserts that they were formed of that extent, to mark the number of the days in the ancient year, is, in the first place, because that number is more consistent with probability; and secondly, because it is in entire unison with the sentiments entertained by a race who seem to have regulated all their public proceedings by some sort of astronomical calculation. For, in confirmation of this account, he adds, that Semiramis employed, in building Babylon, two millions of

men, who built a stadium or furlong each day, till the whole was finished in a year, containing *that number of days**.

The complete vindication of Herodotus, who states the number of furlongs to be so much greater, is not difficult. A little attention to early Chaldæan history, as recorded by Berosus and detailed by Josephus†, will fully justify what may appear an exaggeration in his statement.

When Nebuchadnezzar ascended the Assyrian throne, among other grand projects of his ambition, he resolved that Babylon should equal Nineveh in extent; and the walls of that more ancient capital having, as we are informed by the whole voice of antiquity, been just 480 furlongs in circumference, he enlarged those of Babylon to that extent, by building on the western quarter of the city; and when Herodotus visited it, they were of that *computed* admeasurement; for it does not appear that the infatuated monarch reigned long enough to complete all his vast projects in regard to that proud city, which he gloried to have built *by the might of his power and for the honour of his majesty*; Daniel iv. 30. Thus, then, does the verity of these two great historians remain unshaken, though their accounts of its dimensions are somewhat at variance; but Diodorus, instructed by Berosus, alludes to its *original* walls; Herodotus, to their circumference, as *enlarged* by Nebuchadnezzar.

If the reader should be startled at the magnitude of these dimensions of the improved city, and the enlarged walls of Babylon, let him, dismissing for a moment his European prejudices, advert to those of other great cities in different regions of Asia, but in particular those

---

* Diod. Sic. lib. ii. p. 120, 121.

† Vide Berosus apud Joseph. Antiq. Jud. lib. x. cap. 11, p 537.

of India, their palaces and their temples, either at present existing, or to be traced in their stupendous ruins. Among their cities let history point out to him those of CANOUGE and GOUR, on the Ganges, whose vast ruins attest their ancient magnificence. With respect to their temples, both subterranean and supernal, let him advert to the stupendous excavations at CANARAH, a work, in Niebuhr's opinion, surpassing the pyramids in labour, and the sculptured cavern-temple of ELEPHANTA; let him survey CHILLAMBRUM, JAGGERNAUT, and the still vaster pagoda of SERINGHAM, on the Cauveri, thus truly described in the Indian Antiquities. "It has seven square inclosures, one within the other, the walls of which are twenty-five feet high and four thick. The inclosures are 350 feet distant from one another, and each has four large gates, with a high tower, which are placed, one in the middle of each side of the inclosure, and opposite to the FOUR CARDINAL POINTS. The outward wall is *near four miles* in circumference, and its gate-way to the south is ornamented with pillars, several of which are single stones thirty-three feet long, and nearly five feet in diameter; while those, which form the roof, are still larger: *in the inmost inclosures are the chapels.*" vol. iii. p. 51. With respect to the magnitude and extent of the walls, let him look into the page of Xenophon*, and read his account of the great wall, cemented also with bitumen, that anciently extended between the Euphrates and Tigris, above Babylon, one hundred Grecian feet in height, twenty in breadth, and twenty parasangs, or sixty

* Of this famous wall, but so little known, since it is no where mentioned, except in the *Anabasis* of this author, the reader will perhaps thank me for presenting him with the following correct translation from the Greek original: Ad Mediæ MURUM perveniunt (Græci) quem et ingressi sunt, extructum opere latericio, et *bitumine*, quum latitudinem haberet XX pedum, altitudinem C, longitudo ferebatur esse parasangarum XX, neque procul a Babylone aberat. Xenophontis Anabasis, lib. 1, cap. 4, p. 102, edit. Oxon. 1703.

miles, in length, an inferior monument of grandeur indeed, but supposed to have been built by Semiramis herself, and of which a few vestiges only now remain; or let him turn his eye to that more stupendous WALL which protects China from the inroads of the Tartar hordes, in some places carried over mountains of the steepest altitude, and in others through valleys of the profoundest depth, for fifteen hundred miles, forty-five feet high, and eighteen feet in thickness. These august objects, although some are of comparatively modern date, and far from approaching to the grandeur and immensity of the erections at Babylon, considered collectively, may give him some faint idea of what an enervated people, inspired with love to their princes and devotion to the national religion, are capable of accomplishing.

Nebuchadnezzar, however, although, in despite as it were of the reveries of its astronomical founders, he made this alteration in the number of furlongs of the city walls, was nevertheless a fervent adorer of the SUN, as is evident from the vast *golden image of that deity which he set up* to be worshipped *in the plain of Dura, in the province of Babylon;* for which daring impiety, his punishment was at once immediate and exemplary. The dreadful example seems to have had but little effect upon the conduct of his regal successors, who continued to pay their devotions to the solar orb, until the prophecies denounced against that idolatrous city were fulfilled in its complete and boundless desolation.

THE DEVOTION OF THE CHALDÆANS TO ASTRONOMY DISPLAYED ITSELF THROUGHOUT THE WHOLE OF THEIR CIVIL AND RELIGIOUS SYSTEM—PROOFS OF THEIR EARLY AND HIGH ADVANCE IN METALLURGIC SCIENCE.

The more attentively we consider the manners and customs of these Asiatic nations, the fact appears to strike us with increasing convic-

tion, that almost every thing of importance transacted among the Babylonians, Medes, and Persians, in those remote æras, was done by astronomical rules. Cyrus, when he invaded this great city, is said to have cut the river Gindes into 360 channels, in order to render it fordable by his army*: even the transactions of the Haram were in some degree regulated by them; for the number of the concubines of the Persian monarchs was just 360, the number of the days of the unreformed year; a circumstance, by the way, that decisively marks how late in their annals that reformation practically took place; for this is said of the court of Darius, about 530 years before Christ. It would be improper to omit, in this place, the remarkable attestation given to this recorded custom of the Persians, in scripture; for it is there said, that the royal concubines, throughout the year, went, each in their turn, to the king *in the evening, and in the morning returned into the house of the women;* Esther ii. 12.

If now we pass the bounds of Asia, and for a moment look to Egypt, we shall there find prevalent a similar superstition, and we shall not wonder at it, since Egypt was in ancient times *geographically* considered as a part of Asia, and in a *mythological* point of view it certainly was so. The race of Mizraim, also, according to Diodorus Siculus, had two remarkable ceremonies allusive to the same object. The first on record is, that at the tomb of Osiris, during the days of lamentation, the priests who were appointed to bewail his death, daily poured out libations of milk from 360 vases†, to denote, as it is expressly said, the days of the primitive year, used in the reign of that monarch. Another still more curious instance, with a beautiful moral apparently contained in it, occurs in the same

* Herodot. lib. i. cap. 189. Diod. Sic. lib. xvii. p. 220.

† Ibidem, lib. i. p. 26.

author*, viz. that at Acanthe, near Memphis, on the Lybian side of the Nile, it was an ancient immemorial custom, on a particular festival, for 360 priests to fetch water from the Nile in as many vessels from that river, and then to pour the water into a great receiver perforated at the bottom; by which ceremony they represented both the days of the ancient year, and the ceaseless lapse of irrevocable time.

If the English reader should be inclined to doubt this asserted allusion of the ancients, in constructing their buildings, to the days of the year, let him go to Salisbury Plain, and be convinced of its truth by an inspection of the great Solar Temple of STONEHENGE, raised in the most ancient periods by a race deeply infected with the Chaldæan superstition, and probably an emigrated colony from the shores of Asia. He will there find, in the centre of that enormous pile, a circle of twelve massy stones, intended to designate the twelve signs of the zodiac; he will find, also, thirty of a still more prodigious size that form the outer circle, and were doubtless intended to represent the days of the month. If he will multiply this outer circle of thirty by the inner zodiacal circle of twelve, the result will be 360, and this seems to have been the Druidical mode of representing the *ancient solar year*. But to return to Asia, the proper field of our present inquiry.

In additional proof of the assertion, that astronomical maxims were particularly attended to in the construction of the great cities and palaces, as well as in the courts, of Asia, let us now direct our view to ECBATANA, the capital of the neighbouring kingdom of Media. There we find, situated on the summit of a *conical hill*, rising to a vast elevation from the level plain, the palace of Dejoces, its mo-

---

* Diod. Sic. lib. i. p. 29.

narch, surrounded with *seven* circular walls, gradually rising one above the other on the ascent of the cone, and painted of different colours, chemically prepared, to designate the number and supposed colour of the sun, moon, and five planets, the first or outermost being *white* from the battlements upward, the second *black*, the third *purple*, the fourth *sky-blue*, the fifth of an *orange* colour; but the two innermost walls, that immediately inclosed the superb abode of the monarch himself, were most gloriously decorated, the one being covered with burnished gold, and the other with plates of silver*. That the SUN was symbolized by the circular wall of gold, and the MOON by that adorned with silver, cannot for a moment be doubted, when we recollect that, through all antiquity, their orbs were designated by these metals, and that, in fact, to this day they continue their chemical characters.

The same diversities of colouring, rich and brilliant, but principally *deep red* and *sky blue*, were observed by Norden, Pococke, and later travellers, as conspicuously adorning the figures in basso relievo, principally allusive to astronomical details, and the zodiacal asterisms, pourtrayed on the walls and the roofs of the palaces and temples in Upper Egypt, particularly those of Dendera and Philæ.

Ecbatana, the present Hamadan, still boasting a vast castle but in ruins, it will be recollected, was in Media; and Dejoces, its monarch, in erecting this splendid structure, only imitated the example of those ancient sages, who, in the subterranean caverns of Mithra, had long before elevated that VAST LADDER, (a symbol of the sidereal metempsychosis, and an imitation, doubtless, by these romantic Sabian

---

* Herodotus, lib. i. sect. 98.

devotees, of *Jacob's ladder*, which he saw in his dream, *the top of which reached to heaven, and on which the angels of God were seen ascending and descending,)* on the ascent of which were *seven different gates*, according with the number of the planets. A more palpable imitation, indeed, and perversion by these mythologizing priests of the symbols and dogma of a sublimer school than their own occurs not in the whole range of Pagan antiquity, as is evident from their adopting the very word GATE, used by the venerable patriarch in his rapturous exclamation, *Surely this is the house of God, surely this is the* GATE OF HEAVEN. The reader will please to refer to what I have said respecting the word GATE in the Indian Antiquities, vol. ii. p. 242, which is figuratively used for the *whole mansion*; the gate of the house in Eastern countries being that part which is most richly adorned, the place where hospitality is dispensed, and the most important transactions in commerce carried on. Astronomy seized upon the expressive term, and transferred it from terrestrial mansions to the revolving spheres: but to proceed with the allegory.

The first gate, we are informed, was of *lead*, which was intended to mark out the substance and slow motion of the planet SATURN; the second gate was composed of *tin*, by which they shadowed out the brilliancy and softness of VENUS; the third gate was of *brass*, which they imagined a just emblem of the solidity and durability of JUPITER; the fourth gate was of *iron*, by which MERCURY was typified, because he is suited, like iron, to all sorts of labour; the fifth gate consisted of a *mixed mass*, of which the heterogeneous composition, variableness, and irregularity, rendered it the fit emblem of MARS; the sixth gate was of *silver*, exhibiting an apt similitude of the mild radiance of the silver empress of THE NIGHT; and the seventh was of *gold*, a proper emblem of the SUN, the one

being the king of metals, and the other being the sovereign of the sky*.

This very curious account of the different metals, and their similitude to the planets, preserved to us by Origen from Celsus, introduces us to a still farther knowledge of the high advance in *chemical* science, at which the Chaldæans had, at that early period of their history, arrived, as well as of its connection with their favourite one of astronomy. I shall, therefore, easily obtain the reader's pardon for extending my observations upon it in an essay professedly treating of the learning of the Chaldæans, who, it is evident, from intense contemplation of the planets under that clear and beautiful sky, where the heavenly bodies appear by night, we are told, as if set in a canopy of *black velvet*, and sparkling with unusual lustre, had attained to some knowledge of the *colours* by which the planets at least are undoubtedly distinguished, although they seem not to be correctly applied on the painted battlements of the walls of ECBATANA. It may not be improper to add, in this place, for the information of those who are curious on the subject, that the *real* colours of the planets, as stated by Huygens, and other modern astronomers, are as follows: the orb of Saturn has a deep bluish cast, and it is remarkable that Sani is always thus depicted by the Indians; Jupiter appears of pure white; Venus, however brilliant, is not without a tinge of yellow; and Mercury is marked by dazzling radiance tinged with light blue.

It has never yet been satisfactorily accounted for, that we designate the planets in astronomical, and metals in chemical, science, by the same characters, otherwise than that the astronomy of the

* See Celsus apud Origen contra Celsum, lib. vi. p. 290.

Greeks came to us through the *Arabians*, the supposed inventors of chemistry; but to those who are chemists, it must be evident that those ancient Chaldæans who were so deeply acquainted with the nature and wonderful properties of FIRE, and who on that account adored it as a divinity, could not possibly be strangers to so exalted and noble a science. In fact, astronomy and chemistry were sister sciences in those early days, and this mode of designating the different planets and metals by congenial characters descended to the Arabians from an older school, even from this of Zoroaster, and the Median Magi, in whose sacred cavern-temples, we have just seen, the planets were first designated according to the various metals. In fact, they thought that those planets were composed of, or at least principally abounded in, that species of metal by which they were so distinguished, or else in a high degree possessed qualities resembling those metals. Thus the *sun*, being the brightest of the orbs, was represented by a circle, the symbol of perfection; and *gold*, being the most pure of metals, was symbolized by the same figure. The *moon*, being the next orb in apparent purity and brightness, was shadowed out by *silver*, the second in rank of the precious metals, and the crescent became the discriminating character of both. *Mars* was thought to abound in *copper*, because his aspect is of a dusky red colour. The sphere of *Venus* sparkled on high with the soft lustre of *tin*. *Mercury* is the symbolic character of *quicksilver*, not only on account of the brilliant whiteness which his lucid orb displays, but because his progress through the heavens was made with rapidity, like the motions of that active and penetrating metal. The dazzling effulgence that in a peculiar manner distinguishes *Jupiter*, seemed to render him fully represented by the shining substance of polished *brass*, or rather *steel*; for this planet and *iron* are designated by the same chemical character. *Saturn*,

whose slow motion among the fixed stars is scarcely perceptible, is properly enough symbolized by that *lead* of which his astronomical designation is the chemical character; there is likewise in lead a bluish cast, which is in a very marked manner the colour of that distant orb.

Though this difference in the colour of the planets may not be so strikingly perceptible to astronomers in the foggy atmosphere of the British islands; yet in the cloudless sky and pure air of Chaldea it doubtless was distinctly discernible. The elder Cassini, who observed the planet Venus in Italy, was enabled in the clear atmosphere of that country to make discoveries, which his son afterwards in vain attempted to verify in the grosser one of Paris. Indeed, the Chaldeans are said to have made the same observations in regard to the various colours of the fixed stars, which require still nicer inspection; and from those colours, in their romantic schemes of judicial astrology, they assigned certain series of them to one planet, and certain other series of them to another. Those of a blue tinge they made kindred with the house of Saturn; those of a reddish tinge, with Mars; those of a yellowish cast, they said belonged to the house of Venus; those of brilliant whiteness to that of Jupiter. The dazzling Mercury had his allies in the vast expanse; and the same influences which emanated from the silver and golden rays of the lunar and solar orbs, were supposed to be equally diffused from those orbs which were of congenial hue.

From these romantic dreams of astrology on the *supposed* influence of the stars, which science, however, it will be recollected, was, in these early periods, the *sister*, if not the *parent*, of astronomy, and that a Chaldean and an astrologer are, even at this day, almost synonimous terms; from those reveries, founded indeed, for the most part, in fancy, but not wholly destitute of instruction, let us

return to the consideration of the *actual* influence of the solar superstition on the manners and customs of oriental nations.

Once more then, and for the last time, amidst this effulgence of false glory, streaming from the prostituted altars of Asia, let our attention be directed to the empire of Persia, where the great SHAH-IN-SHAH, or king of kings, commands our attention from his lofty throne,

Rich with the wealth of Ormus and of Ind.

No description can be more splendid and animated than that given of the pomp of the Persian monarch marching to battle, by Quintus Curtius, who doubtless had the narration from oriental sources. He declares it to have been an immemorial custom among the Persians, for the army never to march before the RISING OF THE SUN; that a trumpet, sounding from the king's pavilion, proclaimed the first appearance of its beam; and that a golden image of its ORB, inclosed in a circle of crystal, was then displayed in the front of that pavilion, which diffused so wide a splendour that it was seen through the whole camp. Roused to action by the SOLAR RAY, when the army began to move, they regulated the order of their march by the motions of their celestial leader. They bore aloft the expressive symbols of his magnificence, in bestowing upon them light and heat; and they kept constantly before their eyes a conspicuous memorial of his own diurnal progress through the expanse of heaven.

According to the same writer, in the front of the army was carried, upon silver altars, the sacred and eternal FIRE that was believed to have descended from heaven. Immediately after came the Magi, chanting hymns, after the fashion of their country, in honour of MITHRA. Then followed 365 youths, representing the days of the *reformed* year, and clothed in vestments of a bright *red* or *flame* co-

lour. To these succeeded the chariot of Jupiter, (that is, *the God of the firmament*,) drawn by white horses, and followed by one of exceeding magnitude and superior beauty, called THE HORSE OF THE SUN, and in a peculiar manner consecrated to that deity. The grooms appointed to train and conduct these horses were arrayed in white garments, and bore in their hands golden rods, or wands, pointed at the end in imitation of the SOLAR RAY*.

The above reference to the manners and customs of the Medes and Persians must be allowed to be strictly proper, as those nations, it will be recollected, once formed an integral portion of the great Assyrian empire. Rites and customs analogous to these, I have elsewhere demonstrated to have been *anciently*, and in a variety of instances are, *even now*, predominant almost to the extremity of the greater Asia! They flourish in their full vigour on either side of the Ganges; every where the sun beams, the fire blazes, amidst the devotions of the rapt *ignicolist;* and the buildings of the Chaldæan Indians are all *cones* or *pyramids*, formed as nearly as possible after the model of that mighty TOWER, from which their ancestors were dispersed over the earth so many centuries ago. The peculiar resemblance to that tower of the great pagoda of Tanjore has long ago been remarked by Major Rennel†; and my esteemed friend, Mr. HODGES, having with his own superior hand, in the year 1796, presented me with an exact drawing of it for the decoration of my Indian Antiquities, I have had it retouched by the engraver, and here present it for the inspection of the indulgent reader. To that subject I now finally return.

---

* See Quinti Curtii, lib. iii. cap. 3 and 4.

† Rennel on the Geography of Herodotus, p. 360, edit. 1800.

In the hypothesis that the high tower in the centre of the area of the Temple of Belus in succeeding ages built around it, was, in fact, the Tower of Babel, or at least the remains of it, I am far from being in want of able supporters; as, in addition to the ancient authorities above adduced, many modern writers of high respectability have joined in it; and, in particular, Dean Prideaux, who has minutely described both the *tower* and the *city* of Babylon, and who not only declares it to be his own opinion, but brings powerful arguments from Bochart in aid of it, which the reader may consult, as the whole passage is too long for insertion in this place*. The passage begins with these words: "The next great undertaking of Nebuchadnezzar at Babylon was the construction of the Temple of Belus. But that which was most remarkable in it was *none of his work*, but was built many ages before. It was a wonderful TOWER that stood in the middle of it," &c. &c. That it was intended as a Temple to the Sun (from its pyramidal form resembling fire, or the conical shape of its flame) was long ago averred by Archbishop Tennison to be his private belief, in the following passage: "In those plains (the Chaldæan) the Tower of Babel was built, and (as my private imagination leadeth me to think) consecrated by the builders TO THE SUN, as to the most probable cause of drying up the waters†." Mr. Bryant ‡ fully coincides with him in this belief. Speaking of Babel, he says, "This city was begun by Nimrod, and enlarged by his posterity. It seems to have been a vast seminary for idolatry; and the TOWER, a stupendous building, was *erected in honour of the* SUN."

* See Prideaux's Connection, vol. i. p. 78, folio edit.

† Tennison's Origin of Idolatry, p. 42.

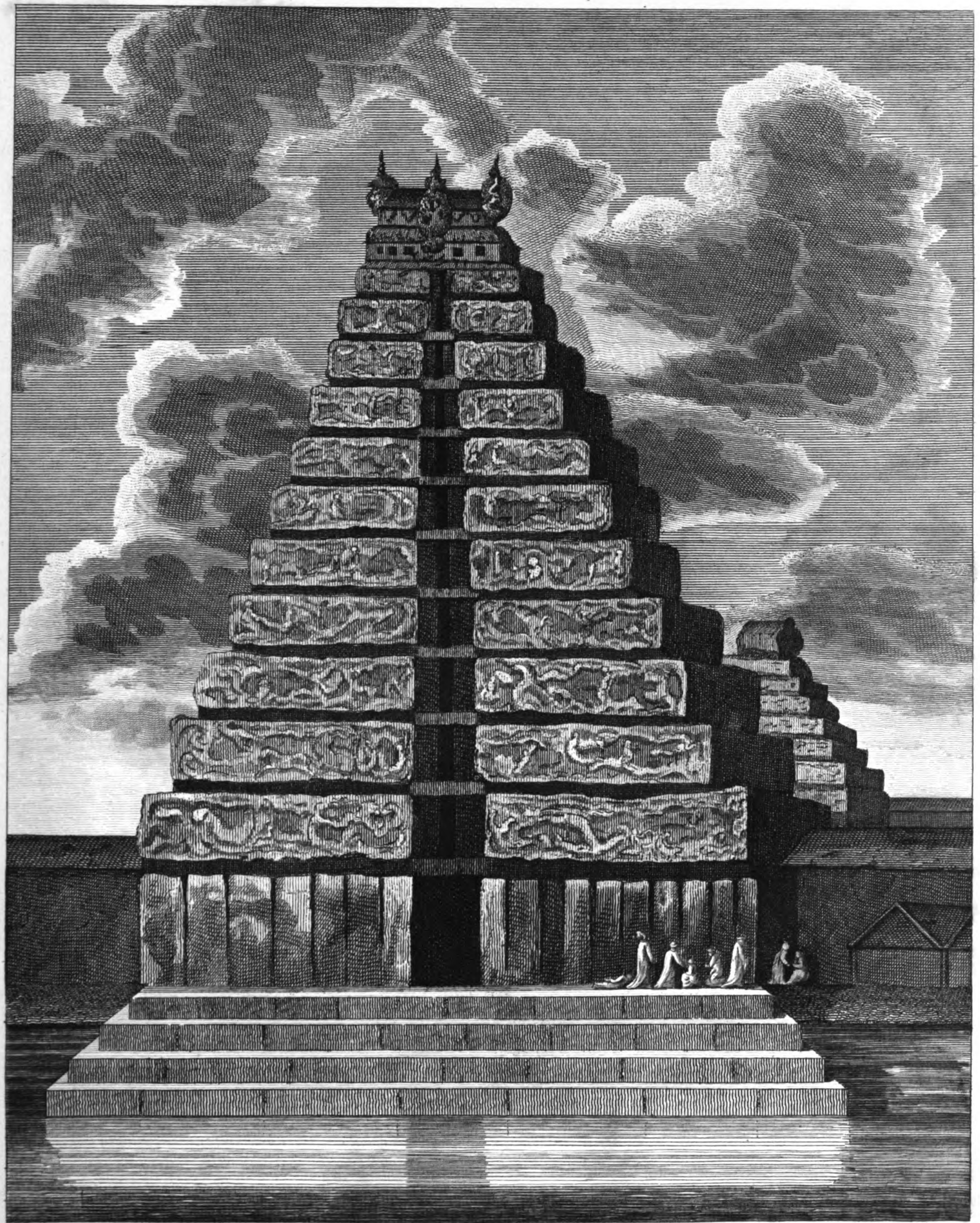
‡ Bryant's Analysis, vol. iii. p. 45.

In the hypothesis that the high tower in the centre of the area of the Temple of Belus in succeeding ages built around it, was, in fact, the Tower of Babel, or at least the remains of it, I am far from being in want of able supporters; as, in addition to the ancient authorities above adduced, many modern writers of high respectability have joined in it; and, in particular, Dean Prideaux, who has minutely described both the tower and the city of Babylon, and who not only declares it [illegible], but brings powerful arguments from [illegible], which the reader may consult, as the whole can[illegible] in this place*. The passage [illegible] [illegible] great undertaking of Nebuchadnezzar at [illegible] the Temple of Belus. [illegible] that [illegible] was one of [illegible] built [illegible]. It was a [illegible] in the [illegible] the Sun [illegible] of its [illegible] private [illegible] the Tower of Babel was [illegible] leadeth me to think) consecrated [illegible] Sun, as to the most probable cause of [illegible] Mr. Bryant† fully coincides with him in [illegible] of Babel, [illegible] was [illegible] to have [illegible] building, [illegible]

* [illegible] Connection, vol. i. p. 78, folio edit.

† [illegible] of Idolatry, p. 42.

‡ [illegible] Analysis, vol. iii. p. 45.



THE GREAT PAGODA OF TANJORE;

evidently formed after the model of the

The learned M. Bailly*, Mr. Costard†, and many other authors deeply conversant in the astronomical mythology of these ancient periods, amply support the hypothesis that it was built for an OBSERVATORY, and nobody doubts of its having been thus applied in after ages. It was personally visited, as before observed, in its decaying grandeur, after it had been plundered and defaced by Xerxes, by Herodotus, 440 years before the Christian æra. It was viewed with astonishment, even in that decayed state, by the captains of Alexander, who designed to have restored it to its former splendor, and, as we are informed by Arrian‡, actually set 10,000 men of his army about it; but Strabo§, on a survey of these ruins, affirms that ten thousand men would not be able, in two months, to have removed even the rubbish, and Alexander's subsequent death put an end to the project. Pliny, in the first century of the Christian æra, speaks of it as then standing, and with quoting his words I shall, for the present, close my observations on this ever memorable TOWER and TEMPLE: Adhuc ibi (Babyloni) Jovis Beli templum. INVENTOR HIC FUIT SIDERALIS SCIENTIÆ ‖.

Although, however, our observations on the *tower* itself have for the present terminated, we must not wholly lose sight of the *founder* and his *family*, whose history makes an interesting portion of the annals of these early ages, deeply connected as they are with its astronomical mythology, and under which, in fact, the whole of that history is veiled.

---

* Hist. de l'Astron. Anc. p. 354.

† Costard on the Chaldæan Astron. p. 57.

‡ Arrianus de Expeditione Alexandri, lib. vii. p. 296, edit. Gronovii.

§ Strabonis Geograph. p. 758, edit. Basil.

‖ Plinii Nat. Hist. lib. vi. cap. 16, p. 380, edit. Aldi.

Nimrod, the founder of Babel, was constellated in Orion.

On the original sphere, formed by the Chaldæans, and of which only the shattered remains have descended, through the Greeks, to our times, (for that of the Egyptians is distinguished by objects, and is replete with allusions, peculiar to their own climate and mythology,) our researches into oriental antiquity have informed us there were engraved many obsolete asterisms, such as the *Sacrificer*, the *Altar*, *Succoth Benoth*, the *Phalæna*, and others, of which only very slight glimmerings of intelligence have reached us. They are sufficient, however, to demonstrate the fact of such an ancient sphere*, and such asterisms, having once existed in Chaldæa. They were afterwards perverted both by Egyptians and Greeks to suit their respective mythologies, as the learned Vossius on this subject has truly remarked. Ut Græci omnia suis heroibus tribuunt, ita et suis Ægyptii.—Vossius de Idol. lib. i. cap. 28. Orion, however, has kept his exalted station unchanged on every sphere; that station to which the devotion or fear of his Chaldæan subjects had elevated their departed monarch.

This mighty chieftain, we have before observed, was sometimes mistaken for and denominated Belus, properly the appellative of his son. With respect to this name of Nimrod, Bochart makes it synonimous with Νεβρωδες, a Greek name of Bacchus, or, as he writes it, *Bar-Chus*, and draws a parallel between the characters of the Hebrew deified mortal, the son of Cush, and the ancient Greek deity.

* See Hyde de Relig. Vet. Pers. on the ancient Persian sphere, p. 32; Horus Apollo, lib. i. Hierogl. 2; Selden de Diis Syr. Syntag. 1, cap. 6; and Scaliger in Manilium, p. 371 et 428.

This word, he derives from a Hebrew root signifying to *rebel*, alluding to his rebellion against heaven, while his name of Belus, or *sovereign lord*, alludes to the extent of his dominion*. The mind of the whole Pagan world of antiquity was deeply impressed with traditions of his gigantic stature and enormous power. Homer, who knew nothing of the three great pyramids, those *audacia saxa pyramidum*, yet seems to have well known the history of Nimrod under the name of Orion, the founder of Babylon, the great and iniquitous hunter of men and beasts. He denominates him Ωριωνα Πελωριον†, which, Mr. Bryant observes, betokens something vast, and is applicable to any towering personage. He adds, that there was a famous tower near Zancle, called Pelorus, sacred to Orion; and that they erected towers to him in consequence of the majestic magnitude of his person, and called them Pelorus‡. It was natural for those abject subjects who so basely flattered him when *living*, to make a god of him when *dead*, and number him among the earliest constellations. Consequently, he was exalted to the stars under the name of Orion. According to Dr. Hyde, the Chaldaic appellative of this constellation is Niphla, and the Arabian is al Giebbar, quæ *gigantem* ac *fortem* significant§; and surely there cannot possibly be a more accurate description of a tyrannical and cruel monarch than these words convey. But Nimrod, we are informed, was *a mighty hunter before the Lord*, a hunter of *men* as well as of *beasts*, for so the best commentators explain the word: and could a twofold character like this be more decisively marked, than by being delineated in the manner we see Orion drawn on the

* Bocharti Phaleg. lib. iv. cap. 13.

† Odyssey, lib. i. 571.

‡ Analysis, vol. i. 413.

§ See Dr. Hyde's edition of Ulug Beg, p. 45. Edit. quarto, Oxon.

celestial sphere; as a gigantic figure, armed with a massy club, very near to the *greater* and *lesser Dog*, and the *Hare?* Proportionate to his former dignity and splendour are the ample space and conspicuous station allotted to Orion in the heavens. This constellation is crowded with stars visible to the naked eye, and of superior magnitude and beauty; while those which powerful telescopes have discovered in it have defied the ability of astronomers to enumerate. It is so evident WHO is the real object alluded to in this astronomical hieroglyphic, that I shall not insult the reader's understanding by dwelling too long on the Greek fables respecting Orion; yet it is still proper to take some transient notice of their romantic details. That vain people accommodated their allegorical history of the early ages of their nation to the asterisms already formed by the fathers of mankind, and endeavoured to make a *foreign sphere* their own. The world has been imposed upon from age to age, by the elegance of their allegories and the beauty of the language in which they were written, to credit the artful tale; with what truth, will be demonstrated as we proceed in this, I trust, not uninteresting discussion.

The story of Orion's birth, as recorded by Hyginus, is too romantic to be related here; as he was an extraordinary man, they conceived that he ought to have as extraordinary a birth. It is sufficient to say that he was born in Thrace, the offspring of the will of Jupiter, Neptune, and Mercury, who had been hospitably entertained by his pretended father, who requested a child of his immortal guests*. On this ridiculous story, there is a very judicious remark of the Abbé Banier, that though Homer repeatedly mentions Orion, yet, fond as he was of enriching his poem with the Greek mythology, he never

---

* See Hyginus, Fab. 81.

once mentions the wonderful circumstance of his birth: a plain proof, adds the Abbé, *that the story was not yet invented**. According to the Greeks, he was not only a great hunter, which makes Homer sing that he hunted wild beasts in hell, but a great astronomer. His skill in hunting, they say, rendered him the object of the jealousy of Diana; and on that account, according to some mythologists, he was shot through with arrows by that goddess; but, according to others, because he attempted with unhallowed hand to remove the veil of that chaste divinity. Others again (for, as few stories in their whole mythology are more celebrated than this of Orion, so none are more variously related) give a very different account of the mode of his death, asserting, that at the command of Diana a scorpion issued out of the earth, and stung him to death; but the goddess being penetrated with anguish, both Orion and the reptile that occasioned his death were afterwards translated by her into heaven; the one forming a conspicuous constellation in the northern hemisphere, the other a sign of the zodiac.

It must be evident to every person of reflection, who considers the preceding account of Orion, that it contains the shattered fragments of the true history of this celebrated post-diluvian personage, mixed with Grecian astronomical mythology. Since Nimrod, who began, and Belus who finished, the observatory at Babylon, were by many of the ancients considered as the same person, we are not to wonder at finding the Orion of the Pagan world the copy of the former, thus blending the science of astronomy with the sports of the field: otherwise there would be just ground for astonishment at the unaccountable union of two such opposite characters. We may even trace the re-

* Banier's Mythology, vol. iv. p. 386.

semblance considerably farther, and in this too close and curious attention to Diana the huntress, discover the anxious astronomer of Chaldæa, fixed in intense contemplation upon her orb, and watching her phænomena, accurately to mark the lunar revolution, and form that first effort of Babylonian astronomy, the *lunar mansions*. Her reluctance and revenge may shadow out the ill success of the first attempt, as his death by the sting of a scorpion, doubtless, does his decease when the sun was in that noxious sign.

The importance of this constellation in the opinion of the ancients, is evident from their frequent and animated descriptions of it. There is one particularly in Aratus* which depicts Orion; and Manilius describes this personage as the mighty leader of the starry host†. Orion indeed was a constellation equally beautiful and terrible; and seems from his sidereal throne, in all ages, to have exerted over the *minds* of men as great a despotism as he did, when a terrestrial sovereign, over their *persons*. The mariner and the husbandman alike shuddered at his supposed influence upon the elements. Concerning the imminent danger when Orion was setting, Horace emphatically observes;

> Sed vides quanto trepidet tumultu
> PRONUS Orion!‡

and the Mantuan bard is not less particular in his account of the danger when this constellation was rising,

> Cum subito ASSURGENS fluctu nimbosus Orion,
> In vada cæca tulit.

---

* Aratus, line 787.

† Manilii Astronomicon, line 77.

‡ Horace, Carm. lib. iii. 27. 18.

It probably arose from the magnitude and splendour of this constellation, that it is so particularly mentioned in the book of Job, (composed, the reader will please to bear in mind, above 1600 years before Christ); and if Mr. Costard's remarks on the constellations recorded in that ancient, sacred, and sublime drama be admitted to be founded in truth, it should appear as if Orion, in some particular situations and aspects in the heavens, was considered by the eastern husbandman as shedding benign and friendly influences.

While Nimrod, however, has been exalted to the skies by ancient mythologists, others, of more modern date, have exerted their utmost endeavours to degrade him from that exalted station, and have identified him with that Vulcan whom Jupiter hurled from heaven; a fable which they say is founded on the overthrow of Babel, and the supposed destruction of Nimrod therein*. Mr. Bryant, in particular, strenuously contends for this interpretation of it in the following passage. "Many writers speak of him as being thrown off from the battlements of a high tower by Jupiter: and there is a passage to this purpose in Homer which has embarrassed the commentators; though I do not think it very obscure, if we consider the history of the person to whom it relates.

Ριψε ποδος τεταγων απο Βηλου θεσπεσιοιο.

The poet, who was a zealous copier of ancient mythology, mentions, that Vulcan was cast down by Jupiter from an eminence. He says, that he was thrown απο Βηλου; which must certainly signify απο πυργου Βηλου, or αφ' ἱερου Βηλου; for the sentence is manifestly elliptical.

He seiz'd him by the foot, and headlong threw
From the high tower of Belus†."

---

* See Bocharti Geog. Sac. lib. ii. cap. 2; and Bryant's Mythology, vol. iii. p. 47.

† Bryant, ibid. p. 48.

But of this important personage of antiquity more than enough has been said: let us attend to the mythological history of Semiramis, the oldest of the name, (as there seem to have been several,) for she also was elevated to those stars which her subjects so fervently adored.

Semiramis was also canonized, and became the Dea Syria of the Babylonians.

That the heroine who had conferred such numerous benefits on her Assyrian subjects should be canonized by them, when dead, cannot be a subject of wonder; and the learned Selden has intimated in very strong terms the probability of her being the original Dea Syria, from the earliest periods adored in that quarter of Asia, under a thousand different appellations. From her being the most ancient heroine deified upon earth, she might have been the prototype of all those numerous female divinities, who, under the names of Astarte, Astaroth, &c. were worshipped in Sidon, at Hierapolis, and many other regions of the Greater and Lesser Asia. Her distinguishing appellation at Babylon was Mylitta; Herodotus describes her by this name, for so he tells us the Assyrians expressly called the Venus Urania of other authors*. Her symbol was a dove or pigeon, which her name in the Syrian language implies, she having been nursed by pigeons, according to their legends; and that emblem was therefore painted on the standards of the Assyrians, when they went forth to war. Hence Jeremiah, when he forewarned the Jews, that the Assyrians would come and lay waste their territory, says, *fugite a facie gladii* columbæ. *Fly from the face of the sword of*

---

* Herodot. Clio, sect. 199.

the Assyrian DOVE, (Jeremiah, xlviii. 28.) *Doves from Assyria* are also mentioned in Hosea, xi. 11; and the whole country was celebrated for being a nursery of them.

It was not, however, the dove that fluttered on their warlike ensigns that was so much venerated by the voluptuous Assyrians: it was the dove renowned in Paphian wars to which their vows were chiefly addressed; for, in the courts of her superb temple, at Babylon, the most shameless indecencies prevailed, and the boundless prostitution of female beauty, of all ranks, was not only permitted, but sanctioned, by the mandate of the goddess, as may be collected from Herodotus and Strabo, as well as from the animated anathemas against these impurities to be found in Jeremiah and the other prophets. There is no occasion for our going into the scandalous particulars, of which the *most* scandalous was, that the wages of this shameful traffic were applied to religious purposes.

Semiramis was also constellated in the SUCCOTH BENOTH of the Assyrians, an old asterism of the Chaldæan sphere, meaning, Selden informs us from the Rabbins, the *hen and chickens*, and corresponding to the *Pleiades* of the Greek sphere*. This name was given them (for the story of the Atlantides is too absurd to be admitted, even as a legendary tale) from πλεω, *navigo*, because the most favourable season for setting sail was esteemed to be at the heliacal rising of these stars, that is, in the spring and about the month of May, whence also by the Latins they are sometimes called Vergiliæ. This constellation, therefore, being a beneficent one, and its heliacal rising of the utmost importance and benefit to a race devoted to agricultural concerns, the symbol of abundance and fertility to an exulting nation, was thought

* Selden de Diis Syriis, Syntagma 2, cap. 7.

a proper abode for the munificent Semiramis. But there is another oriental name for the Pleiades, in those early periods, considered not merely as a splendid portion of a conspicuous asterism, the BULL, in whose neck it is situated, but as an important asterism itself, which name will perhaps introduce us to a still farther knowledge of the great character in antiquity to whom it is applied. That name, Dr. Hyde informs us, is AIYUK, translated by the Greeks Aἶξ, probably both derived from AISH, a Hebrew word, signifying *to gather together*, as a hen gathereth her chickens under her wings, and therefore peculiarly proper to designate an assemblage or cluster of stars like the Pleiades.

Nimrod, then, we have discovered in Orion, the giant and the hunter, and we have now exhibited the renowned Semiramis, the Babylonian Venus, and the true Dea Syria, in the constellation anciently denominated by that race Succoth Benoth; a word meaning literally the *tents of the young women;* those tents, the soft and genial abode of love, to which there is immediate allusion in the generative warmth of the hen brooding over her young progeny. Hence on many Asiatic and Roman coins the wanton Queen, who took Ninus to her bed, and indulged an incestuous passion for one of her sons, is drawn under the figure and character of Venus Genetrix, with the billing dove for her expressive symbol; and on the Egyptian sphere of the Barberini family, this portion of it, which the bull Apis occupies, is denominated Statio Veneris, the mansion of Venus Hence, too, it is not impossible, that her very name of Semiramis, compounded of SAMAR, brown, and HAMAMAH, a pigeon, a bird of a nature remarkably warm and salacious, might be derived. Oriental mythology, originating in, and retrospective towards, periods far anterior to the date of the fabulous Greek mythology, is alone able to penetrate to the bottom of the

ancient mysterious history of these illustrious Asiatic personages exalted to the stars.

On the ancient Chaldæan Sphere, the Euphrates occupied the space usurped by the Greek Asterism of Eridanus. It commences at the left foot of Orion!

In conformity with the hypothesis here pursued, that the Chaldæans were, in all probability, the most ancient race of astronomers, and formed the first sphere; that Nimrod, the founder of Babel, was constellated in Orion, and Semiramis in the Pleiades; it becomes necessary to degrade the Greek asterism of Eridanus from its exalted station in the heavens, and substitute the more ancient and noble stream of *Euphrates* in its place. From the vast space, too, occupied by this constellation in the sky, it seems to mark the river at the time of its inundation. Dr. Hyde, in his learned Commentary on the Fixed Stars of Ulug Beg, the great Tartar king and astronomer, justly remarks that this constellation is called, in Ptolemy, not Eridanus, but only ποταμȣ ας εριςμος, *the asterism of the river*, which was its more ancient and genuine appellation. In the same manner, the Argo of the Greeks is by Ulug Beg only denominated the ship; and, as I have elsewhere remarked, the royal astronomer in doing this probably followed the detail of some ancient Persian sphere*. Dr. Hyde expressly adds, it is by some writers called ποταμος Ωριωνος, *the river of Orion;* for, in fact, if the reader will advert to the celestial sphere, he will observe that this river commences its course *at the left foot of Orion*. Regel, a star of the first magni-

* See Ulug Beg's Fixed Stars, p. 48, edit. Oxon. 1665.

tude in that foot, may be accounted its head. Now, since we have proved Orion to be no other than Nimrod, this is a convincing proof that the Euphrates was the river first exalted to an asterism, and perhaps it might have been designated as flowing from his foot, either because he first explored its source, embanked the river, or made it navigable.

We must now bid farewel to astronomy, and attend to an ignobler subject, the *bricks* and *bitumen* of Babylon. Before, however, finally quitting these celestial objects that have so long occupied us, it may not be amiss to present the reader with a correct list of the few constellations mentioned by ancient writers, sacred and profane, till the period in which Eudoxus formed the first Grecian sphere.

In the book of Job, of antiquity far beyond all Pagan productions, only six constellations are mentioned, and these are Arcturus, Orion, the Pleiades, the *crooked serpent* or Draco, Mazaroth or the *zodiacal circle*, and Mazaloth the *lunar mansions*. It has been before observed, that the translators of the Bible, not being astronomers, may possibly have wrongly translated the original Hebrew names; but that circumstance is of little consequence in this retrospect. Hesiod, who flourished, according to Newton's calculation, eight hundred and seventy years before Christ, mentions only five constellations, which are Sirius, Orion, Arcturus, Pleiades, and the Hyades. Homer, who lived about twenty years after him, adds to these two more, Boötes and the Wain; he is lavish in his praises of Thebes, but never once mentions the pyramids of Memphis. Nearly a century after we find the prophet Isaiah insulting the humbled monarch of Babylon, under the title of Lucifer, in these terms, *How art thou fallen from Heaven, O Lucifer, son of the morning*, Isaiah xiv. 12. He, too, often alludes to Egypt, but neither does he mention the pyramids! Thales, 600 years before Christ, is said to have formed

the Lesser Wain, though this honour is disputed by the Phœnicians. Finally, about 360 years before Christ, EUDOXUS invented the Grecian sphere.

BABYLONIAN BRICKS, AND THE CHARACTERS INSCRIBED ON THEM.

The most ancient method of writing was on *stone* or *brick*, of which the earliest example on record, if allowable to be cited, may be adduced the two pillars of SETH, alluded to in a preceding page, the one of *brick* and the other of *stone*, said by Josephus to have been erected before the Deluge, and to have contained the history of antediluvian arts and sciences. However disputable this account may be, that of *the tables of stone* on which the decalogue was written by the finger of Deity, and delivered to Moses on Mount Sinai, can admit of no doubt, no more than can the hieroglyphic characters in the most ancient periods, *engraved* on the marbles of Egypt, at present so abundantly in our possession. They remain to this day, and will for centuries to come, a lasting proof of the high advance in the *engraving* art, as well as in *chemical* science, of a nation who, at that early period, could fabricate instruments to cut them so deep and indelibly on the almost impenetrable granite.

In countries destitute of stone like Chaldæa, an artificial substance, CLAY, intermixed with reeds and indurated by fire, was made use of for that purpose. Of this substance, formed into square masses, covered with mystic characters,—ἐξ ὀπτῆς πλίνθου—*of burnt bricks*—the walls and palaces of Babylon were, for the most part, constructed; and we have seen in the accounts of travellers who have visited these ruins, examined the bricks, and observed those reeds intermingled with their substance, how durable, through a vast succession of ages, those

bricks, with their inscribed characters, have remained. Their real meaning, or that of the Persepolitan arrow-headed obeliscal characters, and the still more complicated hieroglyphics of Egypt, however partially decyphered by the labours of the learned, will now, perhaps, never be fathomed in their full extent, by the utmost ingenuity of man. It is probable, however, that those of Babylon, at least, allude to astronomical details, which we have seen they were accustomed to inscribe on bricks; or they may be a sort of *calendar*, whereon were noted the rising and setting of the principal stars useful in the concerns of husbandry; or, lastly, they may contain the history of the founders of those stupendous structures. Impressed at once with their antiquity, their number, and their variety, for almost every brick found amidst these vast ruins is inscribed with them, the astonished spectator is staggered, and is for a moment inclined to coalesce in opinion with Pliny, who says, Literas *semper* arbitror Assyrias*. But the question concerning the origin and antiquity of alphabetic writing, if the mysterious characters on these bricks can be thus denominated, is too important to admit of so hasty a decision; and it also opens too vast a field for discussion to be at present entered upon. In a future page of this work, I may, perhaps, venture to offer a few reflections on this important subject. I cannot however avoid owning myself very much inclined to join in opinion with Mr. Bryant, and other genuine sons of science, not infected with the French sceptical philosophy, that so divine an art could not have its origin in the unassisted powers of the human mind.

Of the *bitumen* with which these Babylonian bricks were cemented together, and which was plentifully produced in the neighbourhood of

* Nat. Hist. lib. vii. cap. 56.

Babylon, it may be proper in this place to remark, that it binds stronger than mortar, and in time becomes harder than the brick itself. It was also impenetrable to water, as to the early descendants of Noah was well known, for both the outside and the inside of the ark was incrusted with it, Gen. vi. 14. It may be proper to add here, that the bitumen, to deprive it of its brittleness and render it capable of being applied to the brick, must be boiled with a certain proportion of oil, and that it retains its tenacity longest in a humid situation. Mr. Rich informs us, that it is "at present principally used for caulking boats, coating cisterns, baths, and other places that usually come in contact with water. The fragments of it scattered over the ruins of Babylon are black, shining, and brittle, somewhat resembling pit-coal in substance and appearance," p. 64. It will not be forgotten, that the custom, above alluded to, of mixing straw or reeds with bricks baked in the sun, in order to bind them closer, and to make them more firm and compact, was also used in Egypt, as may be inferred from Exodus, v. 7, where Pharaoh commands the task-masters of the oppressed Israelites *not to give them straw to make bricks*, in order to multiply their vexations and increase their toil.

Speaking of the Babylonian bricks and their variety, in respect to *size*, *colour*, and hardness, Mr. Rich informs us, p. 61, that "the general size of the *kiln-burnt* brick is thirteen inches square, by three thick: there are some of half these dimensions, and a few of different shapes for particular purposes, such as rounding corners, &c. They are of several different colours; *white*, approaching more or less to a yellowish cast, like our Stourbridge or fire brick, which is the finest sort; *red*, like our ordinary brick, which is the coarsest sort; and some which have a *blackish* cast and are very hard. The sun-dried brick is considerably larger than that baked in the kiln, and in general looks like a thick clumsy clod of earth, in which are seen small broken

reeds, or chopped straw, used for the obvious purpose of binding them: in like manner the flat roofs of the houses at Bagdad are covered with a composition of earth and mortar mixed up with chopped straw. At the Birs Nemroud I found some fire-burnt bricks, which appeared to have had the same materials in their composition. The best sun-dried bricks I ever saw are those which compose the ruin called Akerkouf." In the kasr, or palace, our author found in general finer specimens of art; for, in addition to the substances generally strewed on the surfaces of all these mounds, we here find fragments of alabaster vessels, fine earthen ware, marble, and great quantities of varnished tiles, *the glazing and colouring of which are surprisingly fresh.*

It was, doubtless, in allusion to their skill in making these bricks, and engraving upon them historical designs, varnished and coloured to resemble the objects designated, that the prophet Ezekiel, when he himself was a captive among the Babylonians, received this command from God, *Son of man, take thee a tile*, or Babylonian brick, *and lay it before thee*, (as mathematicians who draw lines and circles, or painters who sketch landscapes, are accustomed to do,) *and pourtray upon it the city of Jerusalem;* that is, adorn it in the same manner as the Babylonians make portraits and engrave emblematical images on their tiles—*Lay siege against it, and cast a mount against it*—display upon it all the horrors to which besieged cities are subjected. Understood in this sense the passage is peculiarly beautiful and appropriate; and Lowth, in his note, spiritedly observes, in opposition to some cavillers against the sacred writings, that those who think the emblem here made use of beneath the dignity of the prophetic office, may as well accuse Archimedes of folly for making lines in the dust,—Lowth on Ezekiel, chap. iv. ver. 1. The allusion to this their skill in pottery often occurs in the prophetic writings,

while the Israelites were still captives among them. *Go down*, says God, *to the* POTTER'S HOUSE, *and there I will cause thee to hear my words*, Jeremiah xviii. 2. *As the clay is, in the* POTTER'S HAND, *so are ye in mine hand, O house of Israel*, ibid, ver. 6. Many similar instances might be adduced, but these are sufficient.

It was not, however, merely in the art of making and burning bricks that the Assyrians excelled; they adorned them, we have seen, with various figures of men and animals, *painted* to resemble life, and the colours were laid on the bricks—ἐν ὠμαῖς ἔτι ταῖς πλίνθοις*—in their crude state, and afterwards *burnt in*, which, it has been observed, demonstrates that they had acquired, at that early period, the art of *enamelling*. Among the paintings, Diodorus informs us, was a hunting match, in which Semiramis herself was seen on horseback, piercing with her dart a panther; and near her was her husband Ninus, in the act of fixing with his spear to the earth a furious LION. It will be remembered, that among the painted objects observed by M. Beauchamp on the *varnished bricks*, was the figure of a LION. "I found one brick, on which was a LION, and on others a *half moon* in relief." A statue of a LION of colossal dimensions was also seen amid these ruins by Mr. Rich. On the subject of these peculiar symbolical designs, I shall trouble the reader with some remarks hereafter. On the walls of her palace, too, as described by the same author, were colossal figures in *bronze*—χαλκας εικονας†—of Ninus, the queen, and the principal persons of their court; armies drawn up in battle array, and hunting pieces in great variety.

The process from making pottery to moulding figures in clay was not difficult; but these designs in brass, and the grouping of the figures, must have required much greater skill and labour.

There can be no doubt, however, that the art of throwing metals,

---

* Diod. Sic. lib. ii. p. 97. † Ibid.

K

even the most stubborn, into fusion, was early and extensively known to the descendants of Tubal Cain, who is said to have been *the instructor of every artificer in brass and iron*; and the one hundred gates of brass with which this great city at a later period was fortified, and the golden statues and utensils that ornamented the temple of Belus, may be adduced as proofs of their surprising advance in metallurgic science. But it was in the fabrication of images, formed of the metals, that they, above all things, excelled; those images by which the planetary deities, adored by them, were represented: and to their infinite variety, and the gorgeous manner of adorning them with paint and gilding, according to their imagined colours, while round their heads sparkled the irradiations of glory, such as the constellations appear to dart forth, Scripture bears the fullest attestation in the following remarkable passages, which denounce the vengeance of heaven upon the apostate Jews for imitating them. *She*, i. e. Judah, *doated upon the Assyrians, her neighbours, captains, and rulers,* clothed most gorgeously. *And when she saw men* pourtrayed upon the walls, the images of the Chaldeans pourtrayed with vermilion, *girded with girdles upon their loins, exceeding in dyed attire upon their heads, all of them princes to look to, after the manner of the Babylonians of Chaldea, the land of their nativity; then, as soon as she saw them with her eyes, she doated upon them, and sent messengers unto them unto Chaldea.* And, again, towards the close of the same chapter, it is said, "*Moreover, this they have done unto me:* WHEN THEY HAD SLAIN THEIR CHILDREN TO THEIR IDOLS; *then they came, the same day, unto my sanctuary to profane it.—And, farthermore, ye have sent for men to come from far, unto whom a messenger was sent; and, lo! they came, for whom* THOU DIDST WASH THYSELF, (that is, perform ablutions,) PAINTEDST THINE EYES, AND DECKEDST THYSELF WITH ORNAMENTS. *And sattest*

upon a stately bed, with a TABLE (that is, an altar) PREPARED BEFORE IT, WHEREUPON THOU HAST SET MINE INCENSE AND MINE OIL. *And a voice of a multitude, being at ease, was with her, and with the men of the common sort were brought Sabians from the wilderness* WHICH PUT BRACELETS UPON THEIR HANDS, AND BEAUTIFUL (radiated) CROWNS UPON THEIR HEADS." Ezekiel xxiii. 14.

ADDITIONAL PROOFS OF THEIR HIGH ADVANCE IN CHEMICAL SCIENCE; THE BEAUTY OF THEIR COLOURS USED IN DYING; THEIR SKILL IN HYDRAULICS, DEMONSTRATED BY THE VAST ENGINES EMPLOYED TO IRRIGATE THE PENSILE GARDENS.

The remarkable freshness in the glazing and colouring of the bricks, noticed above by Mr. Rich, opens to us a field for still more extended investigation in respect to the early progress of the Chaldæans in various scientific attainments, upon which I shall enter without fear of exciting disgust. A race so entirely devoted as they were in their palaces, their temples, and the idols that adorned them, to the display of the most gaudy embellishment, and who in particular were so infatuated in respect to *colours*, that they affected to distinguish them in the stars and planets, had doubtless acquired the method of indelibly fixing them on the various argillaceous substances in which their country abounded; and we may reasonably refer to these first artificers in fire, the origin of those beautiful designs in *mosaic*, the stones of different tints, often intermixed with fictitious gems, with which at a later period the imperial palace of Susa was so splendidly decorated. It is in the book of Esther that we read of a beautiful pavement of this variegated kind, when, at the great banquet given by the Babylonian, or Persian, sovereign,

Ahasuerus, for the two empires were then united in one, all the riches of his treasury were displayed to the view of the people. The passage in question impresses the mind with the most exalted idea of the magnificence in which those sovereigns lived, when the great Iranian dynasty flourished in its full splendour. This ostentatious monarch, we are told, *made a feast unto all the people that were present in* SHUSHAN, *the palace, both unto great and small,* SEVEN *days, in the court of the garden of the king's palace; where were white, green, and blue hangings, fastened with cords of fine linen and purple to silver rings and pillars of marble: the beds were of gold and silver, upon a pavement of* RED, *and* BLUE, *and* WHITE, *and* BLACK, *marble.* Esther i. 51.

—— totaque effusus in aulâ
Calcabatur ONYX. LUCAN.

For imprinting argillaceous and other substances with these lasting dies, their country abounded with the richest materials, external and subterraneous, from which those colours might, by able chemists, be extracted. The gardens in the vicinity of Babylon, and, in particular, those of Persia, a part of which was always subject to the Assyrian monarchs, according to Chardin, abound with plants and flowers glowing with the most lovely dies, and conspicuous for their dazzling brilliancy. The mountains of Persia are, also, stored with metals and minerals of almost every kind, and in great profusion. In Media, Parthia, and Bactria, were found mines of iron, so much wanted in his laborious operations by the Chaldæan metallurgist. Silver, lead, and copper, were immemorially supplied by the mines of Mazenderan. Hyrcania produced vast quantities of sulphur and saltpetre; rock salt and alum were to be

had in abundance*. The beautiful lapis lazuli, so useful to the artist, is the produce of the mines of Carmania, now said to be almost exhausted; they are recorded themselves, also, to have possessed a species of *purple* die more beautiful than the Sidonian, and they could easily obtain *indigo* from their Indian neighbours. The beauty of the Babylonian tapestry, vestments, and carpets, was proverbial among the ancients. We are informed by Plutarch, that Cato, having had bequeathed to him a rich Babylonian mantle, immediately disposed of it, as thinking it too splendid for a philosopher to wear; and Arbuthnot observes†, that for a suit of Babylonian hangings for a dining room there had been paid, in Rome, when at its zenith of luxury, no less a sum than £6458 6s. 8d. It will be recollected by the classical reader, that *Pelles Babylonicæ*, most probably skins dyed for exportation, of various colours, are repeatedly mentioned among the articles of export and import enumerated in the cargoes of vessels that navigated the Erythræan sea‡; and, finally, to place the point of their superior excellence in this species of manufacture beyond all dispute, we may once more refer to Arrian, who expressly relates, that amidst the other rich spoils found at Susa by Alexander, were five thousand quintals of Hermione *purple*, which exceeded that of Tyre in beauty, and had been hoarded up there by the Persian sovereigns during the space of one hundred and ninety years, but the *colour* of which was as fresh and beautiful as if just come from the dyer§.

* See Chardin, tom. iii. p. 26, and Tavernier Voyag. tom. i. p. 428.
† Arbuthnot on Ancient Coins, p. 142.
‡ See Vincent's Periplus, part ii. p. 531.
§ Arrian, lib. iv. p. 128, edit. Gronovii, 1704.

In their first efforts to excel in this line, the Chaldæan artists probably used only the simple expressed juice of flowers and shrubs, the most vivid they could select. Fossil earths of various colours, such as their country abounds with, might afterwards be employed; and, lastly, as they advanced in chemical knowledge, minerals lent their aid to exalt their tints, to give them stability, and increase their variety. In painting their beautiful cloths, they doubtless pursued a process somewhat similar to the Egyptians, so minutely described by Pliny: after having drawn the outlines of their design upon the piece of silk or linen, they filled each compartment of it with different sorts of gums proper to absorb the various colours; then they dipped it for a moment in a cauldron full of boiling liquor prepared for that purpose, and drew it thence painted in all the colours they intended. And what he observes in respect to the Egyptian manufactures was very remarkable, those colours neither decayed by time nor moved in the washing, the caustic impregnating the liquor wherein it was dipped having, during the immersion, penetrated and fixed every colour intimately through the whole contexture of the cloth. Doubtless, to have been able to make the colours impressed on these Babylonian cloths continue so fresh and brilliant for one hundred and ninety years, as related by Arrian, argues no small skill and labour in the workman, and excellence in the *colouring material* itself; and these cloths, since the conquest of Persia was achieved by Alexander three hundred and thirty years before Christ, must have been finished about the time of Cambyses, or above five hundred years before the Christian æra.

Though in a race devoted to *fire-worship* we must not expect to meet with any very profound knowledge of *hydraulic* science, yet, from the almost infinite number of aqueducts and canals opened

between the Euphrates and Tigris, by which the region of Babylon was watered, and without which in some parts the inhabitants would have been utterly destitute of vegetable productions, as well as from the necessity of draining the morasses in other parts, their acquaintance with the principles of that science must have been considerable. This indeed appears incontestable to those who have well considered the account given by Diodorus respecting the hanging gardens of Babylon, with their lofty terraces extending gradually up to the summit of the walls, which were two hundred feet in height, and at that stupendous elevation were refreshed with water forced up by immense engines from the bed of the Euphrates*.

A proportionate knowledge of the principles of *pneumatic* science was also necessary to a race so far advanced in chemistry in the early ages, as there is every reason to suppose the Babylonians were. They must have required, for their furnaces, machines for collecting, compressing, and discharging the current of air, in a body forcible enough to promote their respective operations; and these must, in consequence, have been of various dimensions, from those that excited the intense flame, where the rugged ores of copper and iron were fused, to the gentler blast necessary to perfect the exquisite work of the goldsmith and the enameller. The invention of the BELLOWS is, indeed, ascribed by Strabo to Anacharsis, the Scythian†; but is far more likely to have originated among a race represented from all antiquity to have been thus skilled in metallurgic science, and devoted to those mechanic arts which most wanted the assistance of that useful implement.

I must in this place, once more, assert my conviction, that the

* Diod. Sic. lib. i. p. 98. † Strabonis Geograph. lib. vii. p. 229.

Chaldæans must have learned the principles and practice of chemistry and other abstruse sciences from their antediluvian ancestors; for, otherwise, there had scarcely elapsed time enough, *since the flood*, for their becoming such expert artificers as, in these pages, it has been demonstrated they undoubtedly were. Prior to their being so skilful at the *forge*, other and most arduous labours must have been undergone; for, as is judiciously observed by a respectable author of the present day, it was impossible to work upon these metals without first knowing the art of digging them out of the mine, of excavating them, and of refining and separating them from the ore, all which are chemical operations, and must have been at first invented by those who excelled in the art, however afterwards they might be put in practice by the meanest artizans. Those who are engaged in the working of copper mines, for instance, and know that the metal itself must pass above a dozen times through the fire before it can acquire its proper *colour* and *ductility*, will easily accord with this sentiment*. From the bronze figures that adorned the palace of Semiramis, it is evident that the Babylonians must have been well acquainted with all these arduous processes, and doubtless they also well new the important fact mentioned by Vitruvius (lib. xvii. cap. 3) that *colours laid, with due attention, on wet plaster, do not fade, but are perpetually durable.* Consonantly to this rule, which, in all probability, was first promulgated in their own more ancient school, the Babylonians laid on their colours in brick and mortar, while yet humid and unbaked, and thus fixed them indelibly in the absorbing matter. Respectable, however, as M. Dutens is on this and some other subjects discussed in his very curious volume, I shall find it necessary hereafter to controvert his favourite doctrine of the antiquity

---

* Dutens' Enquiry, &c. p. 236.

of the ARCH, *no signs of which are to be found in all the extensive ruins of Babylon.*

THEIR SKILL IN ARCHITECTURAL SCIENCE PROVED BY THEIR BEING ABLE TO RAISE SUCH VAST STRUCTURES, AS THOSE OF BABYLON, AMIDST A MORASS.

The more we reflect on the majestic structures raised at Babylon, and the nature of the ground on which they were erected, the more must we be lost in admiration and astonishment at the wonderful mechanical skill, the indefatigable labour, and the unwearied patience, of the persevering architects! Egypt was a country stored with inexhaustible quarries of the most durable species of marble. The pyramids of Egypt were constructed on a basis of solid rock, in a fine climate, and elevated above the reach of inundating floods. They have already bid defiance to the elements for 3000 years, and it is probable may do so for 5000 years longer, if a calculation formed on the *progress of their decay* since the time of Herodotus, may be depended upon, and should the globe itself endure so long. The materials for constructing the vast edifices of that country, were to be met with in infinite variety in the Lybian mountains adjoining, and they only wanted the labour of the artificer, and the forming hand of the sculptor, to be fashioned into temples and columns, for the admiration of posterity; but the whole region of Babylon, particularly in the early periods we are describing, was a vast morass, and required to be properly *drained* and prepared to sustain upon its surface any ponderous mass of masonry. The same indefatigable labour was also necessary to procure the materials for building, bricks formed of clay, and *burned to a burning*, as is mentioned in the margin of our Bibles. Considered in this point of view, the labour of erecting the edifices at Babel, I must again repeat, may

be esteemed as very far exceeding that of those pyramids, and the stupendous temples of the Thebais; and we must not wonder to find Sir Walter Raleigh, in his account of this tower, giving credit to an obsolete author, whom he cites to prove that it was forty-six years in building, which, as he observes, to make sound foundations for such a pile in the low and marshy plains of Shinar, seemed requisite*.

All the efforts of the Babylonians, therefore, to gain celebrity in this way, must have been the result of the most ardent zeal, supported by inconceivable personal toil; and from the fabric of the materials, as well as the marshy nature of the country, no very flattering hope of their duration could ever have been formed. Yet, to the surprise of admiring travellers, the vast ruins of many of them are still visible, and strike with awe the exploring eye. The remainder, owing, either to the *river having changed its bed,* the gradual increase of soil, or perpetual inundations, during 2000 years, have *vanished,* never more, perhaps, to be discovered, or even their outlines efficiently traced!

From all these concurring circumstances, it will appear to the reader less surprising than it otherwise might, that, after the most attentive examination, Mr. Rich should not have been able to find any *decided* vestige either of the *bridge,* or the *vast embankment,* said by Herodotus to have been thrown up on each side of the river, to restrain its occasionally impetuous torrent within proper bounds, and prevent its overflowing the adjoining country. The real cause will probably be found by the reader's turning to the page of Arrian, the most authentic of the historians of Alexander, by whom we are informed, that *that* river, the Euphrates, about the summer solstice, being elevated to a great height by the melting of the snow on the mountains of Ar-

* Raleigh's Hist. of the World, p. 69.

menia, used annually to overflow all the flat country of Mesopotamia and Babylonia, regions inhabited by the primitive race of men; whence arose the absolute necessity of those high embankments on its shores.* On the capture of Babylon by Cyrus, and the subsequent transferring of the seat of his empire to SUSA, these and other great works, that had cost the toil of ages to construct, and the wealth of empires to support, having purposely been neglected, and suffered gradually to go to decay, that great river returning to its full strength at the usual season of the year, the summer solstice, the banks on each side of it would necessarily be exposed to the same ravages which they had before experienced: the swollen and unresisted floods would impetuously sweep away every vestige that remained of them, and at no very extended period leave the country what, on the western side particularly, it has long been, a vast morass: or, in the emphatic language of scripture, *an habitation for the bittern, and pools of water*†.

Without labour, *truly Herculean*, therefore, a country situated between two great rivers, as the word Mesopotamia implies, and those rivers accustomed annually to overflow their banks, when the snows melted on the mountains, where their sources lie, could not possibly admit of the erection of great edifices. Various portions of scripture confirm this account of the swampy nature of the Babylonian territory. *Willows*, that flourish only in a humid soil, are represented as growing there in abundance. *By the rivers of Babylon we sat down and wept*, say the captive and desponding Hebrew race: *We hanged our harps upon the willows in the midst thereof*, Psalm cxxxvii. 2. The plural word *rivers*, used in this place, was doubtless intended to signify the numerous aqueducts and canals that, independent of the Euphra-

* Arrian, lib. vii. p. 489.

† Isaiah, xiv. 23.

tes, intersected the country in almost every direction. The prophets Isaiah and Jeremiah go still farther than this, and, in allusion to the whole country abounding so much with water, call it the SEA OF BABYLON. "*I will dry up the sea of Babylon, and make her springs dry.*" Again, "*The sea is come up upon her; she is covered with the multitude of the waves thereof,*" Jeremiah li. 36. 42.

Mr. Rich confirms this account of the present swampy state of the country, and even of its inaccessibleness at the time of the annual inundation, in these words: "The Euphrates rises at an earlier period than the Tigris: in the middle of the winter it increases a little, but falls again soon after; in March it again rises, and in the latter end of April is at its full, continuing so till the latter end of June. When at its height it overflows the surrounding country, fills the canals dug for its reception, without the slightest exertion of labour, and facilitates agriculture in a surprising degree. The ruins of Babylon are then *inundated so as to render many parts of them inaccessible*, by converting the valleys among them into morasses." p. 14.

No Remains to be found of the Pensile Gardens.

Having inserted in the preceding section only a very slight account of these gardens, which had water conveyed to them in the surprising manner mentioned a few pages back, I now present the reader, from Quintus Curtius, with a more detailed description of their structure and dimensions.

These celebrated gardens were situated within the precincts of the palace, and occupied a square of four *plethra*, or four hundred feet on every side. In Grecian fabulous narration they are deemed a miraculous work; equalling in altitude the summit of the walls, and being rendered delightful by the shade and majestic height of numerous

trees. The square pillars which support the whole weight are built of stone; and upon these pillars the flooring is formed of squared wrought stone, of strength sufficient to bear the earth thrown deep upon it, and the moisture exuding from the watering of the trees; and such vast trees do these massy columns sustain, that their roots descending downwards occupy the depth of no less than eight cubits, or 12 feet, whilst the trees themselves are not less than 50 feet high, and are as productive of their fruits as if they grew and were nourished in their own proper soil. Again, whereas dilapidating Time oppresses and brings to decay not merely works fabricated by art, but even, by degrees, nature itself; this massy structure, which is pressed upon by the roots of so many trees, and is loaded with so vast a grove, remains unhurt; because twenty broad walls support it, with intervals of 11 feet, so that to those beholding it at a distance, the woods seem to hang over the brows of their own proper mountainous hills*.

Yet, of all this immense pile of wood and stone, Mr. Rich acquaints us, not a vestige now remains, unless a solitary tree, of a most ancient date, much venerated by the inhabitants, and called *Athele*, may be thus denominated; although we are informed by him, that "at present the gardens on both sides the river are very extensive, so that the town of Hellah itself from a little distance appears embosomed in a wood of date-trees." This circumstance proves, however, that the climate, in general, is friendly to horticulture, and that artificial gardens, like those described by Diodorus and Curtius, might have once flourished in full-blown pride at Babylon. Mr. Ives, too, when residing at Bagdad, May 25, 1758, writes thus in his journal: "We are at present supplied with pretty good apples and apricots, from some gardens

* Quintus Curtius, lib. v. cap. 1.

which are situated by the *side of the river near Hellah*, and in those gardens are vines, date and other fruit trees; grapes and plums will be ripe in a few days*."

No Remains of the Arch to be found amid the Ruins of Babylon.

Notwithstanding the assertion of M. Dutens respecting the mode of constructing the ARCH being known in the most remote periods, Mr. Rich thinks there are the strongest grounds for supposing that the Babylonians were entirely unacquainted with the ARCH, of which he could not find the slightest trace in any part of the ruins where he purposely made the strictest search, particularly in the subterranean at the Kasr, and the passages in the Mujelibè.

On this subject of the antiquity of the ARCH, I cannot but consider the arguments and inductions of my late learned friend, Edward King, Esq. in opposition to the assertions of his antagonist, M. Dutens, as unanswerable. It is certainly a circumstance not a little curious, as observed by that profound antiquary†, that neither in the Holy Scriptures, nor in Homer, nor in Herodotus, does the word ARCH occur, nor any term properly descriptive of that ornamental part of architecture. He contends that the Greek word Αψις, used in some instances to convey that idea, does not necessarily imply an arch, and that the LXX in their version of the Hebrew Scriptures were obliged to have recourse to the word τοξον *(a bow for shooting)* to describe the rainbow, that first noble exemplar on record of the *arch* given by the

---

* Ives's Travels, p. 279.

† Munimenta Antiqua, vol. ii. p. 223.

Almighty himself to man. The Temple of Solomon had *no arches*; the account of that glorious structure, as given in the first book of Kings, and in the second book of Chronicles, is so full and particular, that whoever peruses them with due consideration, must be convinced of the truth of this statement. Mr. King finds fault with Sir Isaac Newton in his account of his IDEA of this temple, for using the word *arched* passages, which he contends should only be *covered* passages, with flat imposts lying upon them from pillar to pillar.

With respect to Homer, he observes, that though in describing the palace of Priam, Pope in his translation, far more elegant than correct, talks of *arches* and *domes*, no expressions similar to these appear in the original. In regard to Herodotus, in that author's description of the great city of Thebes, there is no account of any arch; and all modern travellers give a negative to that idea. Greaves, Pococke, and Norden, could find there nothing like it; nor do the accurate plates of these travellers exhibit any thing of the kind. The portals of these superb structures for the most part consist of massy pillars of granite or marble, with huge imposts of similar magnitude placed flat upon them. We have before observed the singular fact, that Homer, though so full of admiration at the grandeur of Thebes, that vast city—

> That spread her conquests o'er a thousand states,
> And pour'd her heroes through a hundred gates—

yet never once mentions the pyramids of Memphis, whence our author concludes, that they were not then built. But neither in those pyramids is there any thing resembling an *arch* or *dome* to be found; the great chamber of state containing the SARCOPHAGUS, where, if in any part, we should expect to find something of the sort, terminates not in an arched vaulting, but has a covering perfectly flat, and is

formed of nine immense slabs of marble, extending from side to side. Every survey of its massy edifices seems to prove that the principles on which the arch is constructed were not then known, nor were they, he thinks, at all known in Egypt till after the time of the Ptolemies.

With respect to the age of the pyramids, from Homer's silence concerning them, and their not being once mentioned in the prophet Isaiah, Mr. King is of opinion, that they were constructed about 800 years before Christ; that is, 400 years previous to the visit of Herodotus, a period sufficiently long, he thinks, for Herodotus to speak of them as ancient; but whatever difficulties there may be in the system that assigns for their construction a much earlier date, Mr. King's conjecture will probably not be so readily acceded to on this point, as in his very sensible and judicious strictures concerning the ARCH.

No remains of the Arch to be found in the Bridge, or the Subterranean Passage, of the Euphrates.

Our learned author, in the next place, proceeds to a scientific and rather minute examination of the magnificent edifices of Babylon, as described by classical authors, and whether in all their variety of construction any remains of the arch are to be found. As his remarks are very curious, and the "Munimenta" rather a costly work, I shall give the passage in his own words, only a little abridged in respect to the profusion of Greek learning displayed in it.

"Concerning its great bridge over the Euphrates, Herodotus expressly tells us, that it was built first of stones bound together with lead and iron; upon which were laid ξύλα τετράγωνα, *squared beams.* It must, therefore, plainly have consisted merely of a certain number of stone piers, with timbers placed from pier to pier.

"And that there were *no arches*, in *the gates* of its walls, is most

decidedly apparent, from the *particular* words Herodotus makes use of, and from the precision of his account.

" For he says, that in the compass of its walls, there were an hundred gates, *all of brass, even their posts, and their upper lintels, of the same metal;* where the peculiar word ὑπέρθυρα, *upper lintels,* excludes utterly every idea of an arch.

" Diodorus, indeed, besides the bridge, describes a subterraneous covered passage under the Euphrates, by means of which the Queen could pass from the old palace to the new palace, a distance that, according to Strabo's account, cannot have been less than the extent of a stadium; and this passage has been supposed to have been *arched.*

" But when we come to examine the words of Diodorus with more minute precision, we may perceive, that, although it might be deemed to have been indeed *vaulted,* yet that *no real arch* was introduced in the construction; and that the closing of the *vaulting* above was merely by a gradual approximation of two straight sides, sloping towards each other, by means of every incumbent brick being made to project a little further than that immediately beneath it, till they met so near, that the breadth of a brick would be sufficient to close and join them at the top.

" A literal translation of Diodorus will be, as nearly as possible, as follows:

" *Having turned the river, she formed, from the palaces on each side, a great trench. And building* (τὰς καμάρας) *covered ways of dried brick; on each part she placed melted bitumen, till on each she made the thickness of the layer four cubits. The walls of the trench on the sides were of the breadth of 20 feet, and the height, exclusive of the sloping sides of the vaulting, was 12 feet, and the breadth of the clear passage 15 feet.*

"In the first place, this plain translation clearly leads us to apprehend, that there was *no arch,* since there is not the least intimation in the whole description (though so minute) of any such thing; but, on the contrary, an actual intimation of sides gradually sloping inwards, towards each other, in the upper part.

"And secondly, by thus translating the words in the closest manner, we may also perceive a striking similarity between the very *mode of construction* of this vaulted covered passage under the Euphrates, and that of the covered ways under the *Hanging gardens;* whilst there is a near resemblance in both to the mode of covering the vaulted gallery in the pyramid, and also to the mode of covering several apparent vaults and domes in the most ancient Hindoo buildings in India; a mode that seems to have been universally the substitute for *vaulting*, for ages before the use of *the arch* was introduced.

"And that such was really the kind of covering, or vaulting, of this passage, is greatly confirmed by the account which modern travellers give us of what still actually remains of another covered passage on the very site of Babylon, near the Euphrates.

"For in a fragment of a wall, deemed to have been about 60 feet thick, that ran perpendicular to the bed of the river, was discovered *a subterranean canal, which, instead of being arched over, was covered with pieces of sand-stone, six or seven feet long, by three wide.*

"There appears, therefore, most plainly, to have been *no arch,* either in the bridge over the Euphrates, or in the subterranean passage underneath. And in like manner, there is not any thing said that conveys in reality the least idea of an arch in any one building in the whole city."

Nothing like an Arched Vault, or Dome, in the Temple of Belus.

" One of the translators of Herodotus tells us, in describing the *great tower* and temple of *Jupiter Belus*, that within the uppermost tower of all *a spacious dome* was built: but, on consulting the original words, we find no such intimation; they are merely—νηὸς ἔπεστι μέγας—simply informing us, that in the uppermost or finishing tower, there was *a great temple;* in which, it is added, was placed a great and splendid bed, and a golden table.

" Instead of any intimation concerning *an arch* in the tower, it appears, on the contrary, from the whole tenor of the description, that the interior part of the structure, beneath this building on its summit, was one solid mass, without any open space or cavity left in it; and that there was not hardly any room at all left for apartments in the lower part of the tower, even on its sides: for we are told, that the mode of going up was by a regular winding ascent *on the outside*, and that *in the midst was*—πύργος στερεὸς—*a mere solid tower*, which seems plainly to intimate, that though there was indeed the appearance of *eight towers*, one above another, yet that all *beneath* the cell of the temple on the summit was entirely one solid mountainous pile of earth and brick work, at least in all the central part, whatever apartments might be constructed on the sides of the ascent, and that therefore there were no *arches* for support."

The Arch not to be found in the Pensile Gardens.

" Still more remarkable is it, that even in the celebrated structure of the *Hanging gardens* there does not appear to have been *any arch.*

Modern writers, indeed, and even that celebrated one, Dean Prideaux, mistaking the words of Diodorus, tells us, that 'the whole pile was sustained by vast arches, built upon arches one upon another, and strengthened by a wall surrounding it on every side, of 22 feet thickness;' but, when we come to examine the words of the original with due caution, we find this was so far from being the case, that it appears, from what is said of *the mode* of rearing the structure, there could not possibly have been *any arch* in it.

" The manner of forming the *roofs* or tops of the *cavities* in the mass, Diodorus says, was by their being first covered with λίθιναι δοκοὶ —*beams of stone, whose length, with that of the parts that rested on the side walls, was* 16 *feet, and their breadth* 4 *feet;* and the structure resting upon these stones was composed first of a layer of reeds, mixed with much bitumen; then of a double layer of bricks, cemented together by plaster; and, thirdly, of a covering of thick sheets of lead, that no moisture might penetrate; and over these sheets of lead was laid such a depth of earth, as should be sufficient for the roots of the largest trees.

" Nothing can be clearer, from this whole description, than that whatever *concamerations* or *vaults* there were in this mass, were simply covered at the top with great imposts of stones, or with transom stones, either lying directly on upright side walls, or on side walls, somewhat inclining towards each other in the upper parts, but such as could not in either form *any arches.*

" And what led Dean Prideaux, and other more modern writers, into the mistake of apprehending that there were arches, seems plainly to have been a *preceding* passage in Diodorus: 'that the approach to the garden was like the approach to a mountain, it having structures, and masses piled one upon another; so that the appearance was like the rising of the benches of a theatre, and that *under* the several gra-

dations of ascent were constructed σύριγγες, sustaining the whole mass of verdure;' which word σύριγγες has been translated *fornices*, or *arches*.

"Such translation, however, has surely been adopted without the least authority; for the word, if we duly consider its etymology, seems merely to mean *caverns;* the author obviously only intending to give us to understand, that the whole vast mass rather resembled a small mountain, because there was even the resemblance of a sort of *caves* in it, and sustaining it.

"We cannot then but be convinced, that there were indeed no *arches* supporting these wonderful *Pensile gardens;* neither can we avoid perceiving, at the same time, that they were not by any means of such stupendous magnificence and excessive beauty as has been usually supposed; for if the account of Diodorus be true, and his measures just, and if they took up only a space of four *plethra*, (or of about 400 feet square, as Prideaux computes,) they did not cover a space of ground so large as that of Lincoln's Inn Fields within the rails, nor by any means so large as that occupied by the base of the great pyramid of Egypt.

"Whatever space they covered, it is surely most clear, from the facts adduced, that neither in the fabric of these *gardens*, nor in the temple of *Belus*, nor in the *walls*, nor in the *bridge* of Babylon, were there any *arches**."

Thus far Mr. King, for this large extract from whom I shall not be censured by any man of sound antiquarian knowledge, and it may be of great utility to those oriental students who are at a distance from their native country, and may not be possessed of this expensive and erudite work. I shall just mention here that, for reasons which,

---

* King's Munimenta Antiqua, vol. ii. p. 254.

on a survey of his book, appear unanswerable, he finally fixes the date of the invention of the arch to the age of Democritus in the *fourth*, or, at the latest, of Archimedes in the *third*, century before Christ.

ON THE SYMBOLIC SCULPTURED ANIMALS, THE LION, AND THE BULL, FOUND IN THE RUINS OF BABYLON.

In a former page M. Beauchamp informed us, that on one wall of a chamber he found the figures of a *cow*, and of the *sun and moon*, formed of *varnished bricks*. He found one brick on which was a *lion*, and on others a *half-moon* in relief. He likewise saw amidst the ruins, imperfectly, a colossal statue of an IDOL, as the natives told him it was. On this Mr. Rich, as we have seen in the preceding section, remarks; "I was told the same thing, and that it was discovered by an old Arab in digging, but that, not knowing what to do with it, he covered it up again. On sending for the old man, who pointed out the spot, I set a number of men to work, who, after a hard day's labour, laid open enough of the statue to show that it was a LION of colossal dimensions, standing on a pedestal, of a coarse kind of grey granite and of rude workmanship; in the mouth was a circular aperture, into which a man might introduce his fist."

The COW was naturally enough considered as a sacred symbol, among a race so devoted to agriculture as were the Chaldæans, and the SUN and MOON have, in the preceding pages, been proved to be the peculiar, the chosen, objects of their adoration. I am inclined, however, to think that, if examined closer, it would have proved the male of the bovine species, which was seen by M. Beauchamp, a mistake that might easily have been made during his rapid survey of the ruins at Hella. The twofold representation of the lion, however,

on the brick wall and the colossal statue, entitles that idol to a more immediate and extended consideration in these strictures.

The general belief that pervaded the ancient world, and which we find recorded as such, in the page of Macrobius, that, at the CREATION, the sun rose in the sign LEO*, which was, therefore, considered as his peculiar habitation, was doubtless the reason, independent of his noble figure, fortitude, and generosity, of the respect anciently paid to the symbolic animal, in the superstitious ritual of Asia. It was the sun, in the intense noon-day fervor of his orb, when his beams, penetrating downwards, matured in their beds all the classes of vegetation, and darting to the secret mine, as the Chaldaic philosophy taught them, imparted its lustre to the diamond, and its glow to the ruby; it was this glorious being whom they meant to adore in that splendid asterism. It was this lion, the zodiacal lion, that, in particular, gave its sacred rites and its name to the city of LEONTOPOLIS, in Egypt. The Egyptians, however, had an additional reason for venerating the lion, since it was under that sign that the inundation took place. An order of priests too, it will be recollected, who officiated in the rites of Mithra, were called LEONTES, and the mysteries themselves LEONTICA. The lion gave his skin to the all-subduing Hercules, and, to show the indomitable strength of LOVE, on many of the ancient gems Cupid is seen triumphantly riding on the back of that lordly savage.

Several reasons may be assigned for their veneration of the COW, if that were the symbolical sculpture seen by M. Beauchamp in the mass of ruins at the MUJELIBE, the ruins of the temple! the proper deposit of idols. One I have already mentioned; their devotion to

* Macrobius in Somnium Scipionis, lib. i. cap. 21, edit. 1760.

agriculture, which made them worship her as the principle of *fecundity*. As a symbol of the moon, conspicuous with the black and white spots upon her body, and the horns that decked her head, she was particularly revered ; of that moon to which the Chaldeans were led by their astrological speculations to pay divine honours, on account of the immediate influence of her proximate orb upon all the vast circle of animated nature; and, in particular, her power of raising the *winds* and *tides*, so often fatal to navigation in the infancy of the science. As being a female, too, she was the more appropriate symbol of that *dea luna*, who was the great female divinity of the ancient world, worshipped, as was before observed, under such a variety of names, the Dea Syria, Venus, Urania, Astarte, &c. By the last appellation she seems to have been particularly known and honoured among the Jews, who are accused, by the prophets, of *sacrificing to the Queen of Heaven on the mountains, of making sacred cakes, and pouring out drink-offerings to her*. Jeremiah, 7, 18. However, that faithless and backsliding race did not stop here; for, in another part of scripture, they are expressly said to *have burnt incense unto Baal, to the sun, and to the moon, and to the Mazaloth, and to all the host of Heaven*, 2 Kings xxiii. 5.

If, however, as I suspect, the animal sculptured was the male of the bovine species, it will be far from difficult to assign a reason for the worship of that famous asterism, or at least of the animal that gave its name to it in Chaldæa. If Macrobius, who has written best of all the ancient mythologists on the solar superstition, has rightly assigned the reason of the Leontic worship, or the sun in Leo, astronomy can produce one, at least as valid, for the worship last alluded to; since by retrogressive calculations*, regulated by the *precession of the equi-*

---

* See Bailly's Astron. Ancienne, p. 354, *et seq.*

noxes, after the rate of seventy-two years to a degree, it may be ascertained, that to the inhabitants of Chaldæa the Pleiades rose heliacally, or, in other words, that the vernal sun was in the first degrees of Taurus, about the period of the Deluge, and according to Usher's Chronology, the building of Babel took place only 120 years after that calamitous event; consequently, at that period, the summer solstice was in the first degrees of Leo, which affords another, and perhaps a better, reason for the prevailing adoration of the lion in those æras, than that previously given from Macrobius. At all events, and from whatever cause, these two animals were considered as the most sacred symbols and the most universally adored in all antiquity. The worship of the zodiacal BULL, however, seems to have been the more general and prominent, and of its existence, in almost every country, numerous proofs are yet to be found.

In fact, the heliacal rising of the Pleiades, or, in other words,

> —— Aperit cum cornibus annum
> Taurus, VIRGIL.

'when the BULL with his horns opened the vernal year,' was not only esteemed an auspicious period for sailing, but was the genial season for love and festive sport throughout the whole earth. All nations seem anciently to have vied with each other in celebrating the blissful epoch, when laughing Nature renewed her charms; and the moment the sun entered the sign Taurus, were displayed the signals of triumph and the incentives of passion. Memorials of the universal festivity indulged at that season, are to be found in the records and customs of people otherwise the most *opposite* in manners and the most *remote* in situation; and I cannot avoid considering the circumstance as a strong additional proof, that mankind originally descended from one

great family, and proceeded to the several regions in which they finally settled, from *one common and central spot*. A striking memorial of this fact, that is, of the year opening with the sun in the first degree of Taurus, or on the first day of the month, which we denominate MAY, and the rural sports and pastimes consequent, anciently prevailing in the Asiatic world, have descended down to our own age and country in the festive observance, though now gradually wearing away, of our own joyous MAY-DAY.

THE RESEMBLANCE IN STRUCTURE OF THE GREAT TEMPLE OF MEXICO TO THAT OF BABEL, AS WELL AS THE SIMILITUDE OF CERTAIN SACRED RITES OF AMERICA — PARTICULARLY THE HORRIBLE RITE OF HUMAN SACRIFICES — TO THOSE OF CHALDÆA, EXTENSIVELY CONSIDERED.

But it is not only in Britain that many undoubted remains of the ancient religious rites and civil customs of the Chaldæans are to be traced, brought hither by the first settlers after the dispersion at Babel—it is not only in the great solar temple of STONE-HENGE, astronomically built, so that its multiplied masses of stone, or rather rock, give just 360 days of that ancient solar year, during the continuance of which year, in its unreformed state, the fabric was probably constructed—it is not only in the Hebrides, where, according to Toland*, the fires to BELUS, or BAAL, to this day called BEALTEINE, were annually lighted upon the eve of the *first of May*—it is not only in this country, and in these instances, that so marked a resemblance is to be found, for, if we turn our eyes to the distant shores of AMERICA, even there the deep and lasting traces of it *appear* still to remain; I say

* History of the Druids, vol. i. p. 71.

appear, for in respect to these most ancient æras, all is uncertainty, and by the faint light of analogy only can we explore our way through the labyrinth of ages and of events so long buried in the gulph of time.

If AMERICA existed in its present state at the period of the dispersion of the Noachic families, it was doubtless peopled by that race among whom, it is said in scripture, *the earth was divided after the flood*. What convulsions may have taken place in that remote region of the earth we know not, and it is beside our present purpose minutely to inquire. Without referring to Plato's beautiful but fabulous account of the island of ATLANTIS, exceeding in magnitude both Asia and Africa, and swallowed up by the ocean, it is apparent to the eye of the naturalist, who contemplates the coast of America and its numerous adjacent islands, extending far and wide into the great ocean that separates it from the opposite shore of Africa, the wrecks probably of a vast continent submerged, though not, perhaps, in the manner described by Plato, that some very important revolutions have in that region occurred; at what period—baffles conjecture, but the marks of it are prominent and indelible. If, however, as before observed, America existed in, or *nearly in*, its present state at that remote period, it was most probably peopled by colonies from the north-eastern extremities of Asia, migrating, by some tract not yet explored, in quest of more happy and fertile regions; or, supposing no such tract to exist, they might easily have passed, in the rafts and canoes in use among those northern nations, the narrow strait by which only in that quarter Asia appears to be separated from America. Whoever these migratory colonies were, they indisputably carried with them the idolatrous worship above so amply detailed, and asserted by Acosta, and other historians of that country, to be in a high degree prevalent among them, with all its nefarious appendages, and in particular the profuse shedding of human blood on the altars of the American Mo-

lock. That respectable author has given a description of an ancient Mexican temple to the SUN and MOON, of stupendous elevation and awful in its ruins, in many respects so nearly resembling that celebrated tower, the object of our present discussion, and mentioned as such, both by Mr. Rich and many other authors, who, like himself, have personally traversed this celebrated region of Asia, that I have here ventured to present the reader with an improved engraving of it.

There is, however, unfortunately for the credit and character of the ancient Americans, too much reason for supposing that, with the marked superstitions of Chaldæa, the first settlers in that country did not carry away with them from Shinar that love of the arts and sciences, and that practical skill in them, that patient industry and persevering ardour amidst accumulated difficulties, which, in these pages, it has been demonstrated the Chaldæans so abundantly possessed; or, if they did, the evidences of it were far from being apparent in the desolate, uncultivated, and almost chaotic, appearance of the western continent, when first visited by the daring enterprize of Columbus in A. D. 1492. Throughout its vast extent only two nations could be found, the Mexicans and Peruvians, at all advanced towards any degree of civilization, and to them the knowledge of many of the most useful arts of social life was unknown. The human intellect in America seemed in a state of utter stagnation; the hand of industry seemed wholly paralyzed. Although their Sabian ancestors in Asia were such famous metallurgists, yet had not the Mexicans at that æra acquired the knowledge of the process of forging *iron*, a metal so necessary for felling the timber in those immense forests, with which the country was over-run; for making the implements useful in agriculture, of which they were equally ignorant, for among them

were found neither the *plough* nor the *harrow*; and for restraining by proper embankments within their channels those mighty rivers, whose overflowings had converted the greater part of their country into a barren and boundless swamp. Gold and silver they have ever possessed in great abundance, which, before the arrival of the Spaniards, they refined by dissolving the ore in vast furnaces; into which they threw, says Acosta, a certain mineral substance called SOROCHE, replete with *lead*, to effect that dissolution more speedily; since that period they have used quicksilver, in which their country also abounds, for that purpose. In iron mines, it is now known, America is by no means deficient; but their slow progress in the arts prevented their attaining to the knowledge of the arduous process of rendering malleable that stubborn mineral. In consequence of this deficiency in *iron*, the arrows, spears, and other weapons, used by them in war, were pointed only with sharp flints, or fish bones, while their hatchets, chissels, and other instruments of labour, were made of porphyry, basaltes, jasper, and other very hard stones, wrought and polished by the incessant labour of the hands, with the aid of sand and silex, to conquer the almost invincible hardness of the materials. Of their total want, indeed, of that useful article, iron, this very curious proof is given by Acosta, that, having none at all for the purpose, the horses of the Emperor and the Incas were obliged to be shod with *silver* shoes. All the iron they had in use, he tells us, in his time was imported into Mexico from Spain*.

On the other hand, it is impossible for us to know what stupendous revolutions, and, as before observed, *apparently* they have been

* Acosta's Hist. of the Indies, p. 112.

numerous, may have taken place in this western continent, a large portion of which seems, for uncounted ages, to have been the sport of storms and tempests, and alternately ravaged by those dreadful earthquakes, those bursting volcanoes, which are so frequent in all tropical regions, but so unusually terrific, if its histories may be credited, in America. Successive inundations may have swept away whole races of men, and buried with them in one abyss of oblivion all the labours and records of preceding ages. All remembered or acquired science would thus become extinguished, and the human mind be left a perfect blank, as the Spaniards found it, on their first invasion of these little explored regions. Nothing seems to have survived the wreck but Superstition, the daughter of Fear, and gloomy apprehension! that superstition which the boundless desolation around them would so naturally inspire.

This magnificent temple, above alluded to, is described by Acosta as a pyramidical structure, and towering in the centre of a vast court—inclosed by a wall, adorned on the outside with sculptured figures of *intertwisted serpents*, that ancient Asiatic symbol of *fire worship*, in which court he tells us "ten thousand men might with ease dance in a *circle*," as was sometimes done upon great festivals*. Around this court were built the habitations of the priests and principal attendants of the temple. The court had four gates, *east*, *west*, *north*, and *south*, i. e. they faced the four cardinal points. The ascent to the area at the top of the building was by 120 stairs

* Was this circular dance in imitation of that of the planetary train round the SUN? or was it, as Abarbanel tells us, a rite practised in the adoration of that orb, because its ardent and vivifying beam puts every thing in motion?

of hewn stone, of vast dimensions, and that area was forty foot square, in the middle of which was a pyramidal stone, on which the human sacrifices were offered. On its point the wretched victims were placed on their backs, and forcibly held down, while with a sharp instrument of *flint*, for want of *iron* or *steel*, the priest opened the abdomen, tore out the beating heart, and held it "*smoking to the sun**." The carcase was then by the holy butcher hurled down the flight of steps, which through all their long descent were for ever stained with human blood; and in particular with the blood of immolated *children*, from the presumed purity of the unspotted victim. Exactly after this manner, according to Lucian, who was himself, in his youth, initiated in her mysterious rites, were children sacrificed at the shrine of the Syrian Goddess, where infatuated fathers carried up their devoted children, tied up in sacks, to the lofty summit of the portico of the temple, and thence dashed them headlong down upon the pavement, while their expiring groans were drowned amid the clangor of a thousand instruments†.

Wonderful, however, as this temple was, the greatest wonder seems to be, how, without iron or steel, without the proper tools used in masonry, and the mechanical engines used in architecture, the Americans could contrive to elevate a fabric of such vast dimensions and to such an amazing altitude. What our author, Acosta, says on this subject deserves attention, and is in substance as follows. "The edifices, public and private, of this people were many in number and of excessive labour, as appears at this day by

* See Joseph Acosta's Hist. of the Indies, lib. v. p. 385, edit. quarto, 1604.

† Lucian, De Dea Syria, lib. v. cap. 57.

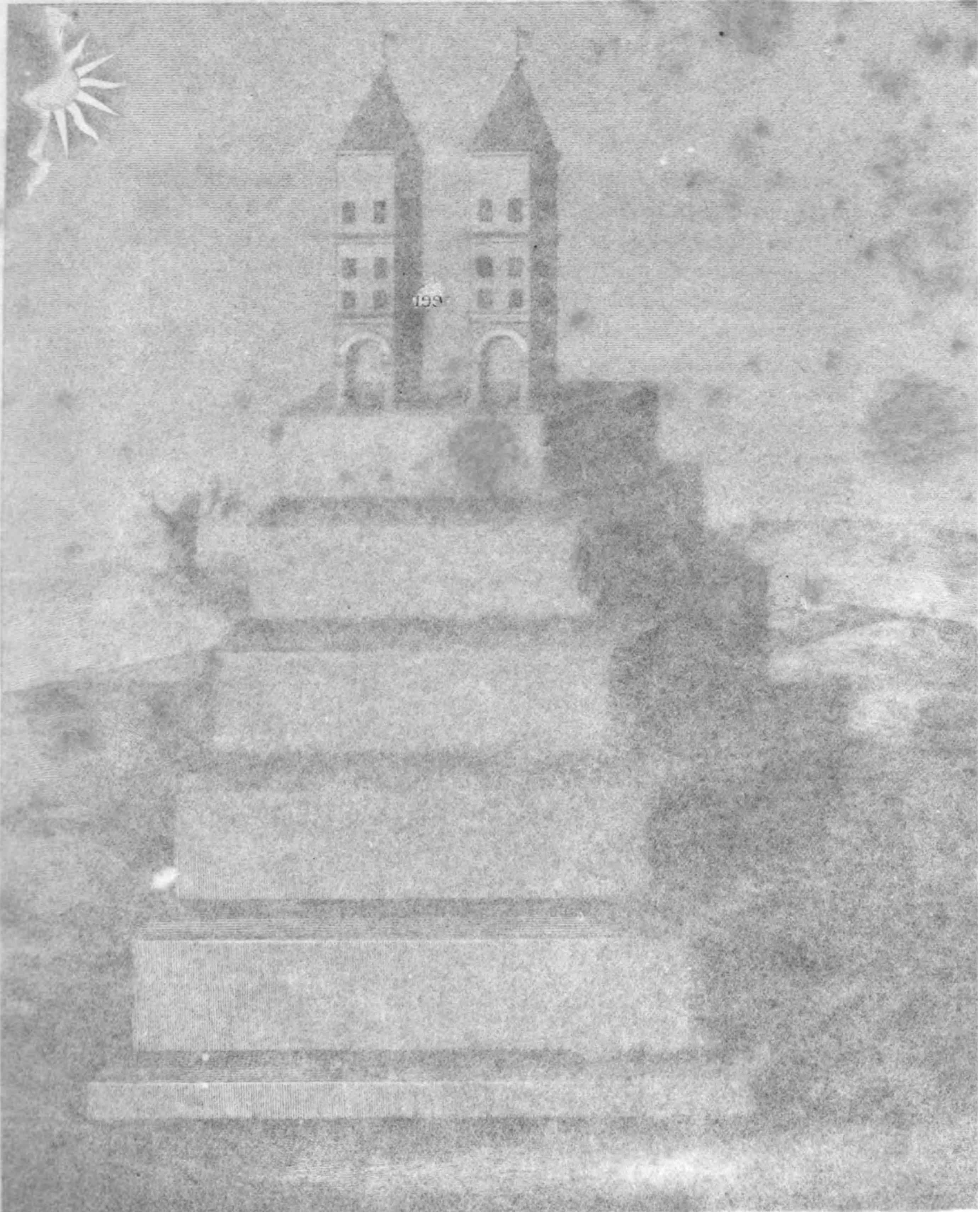
their astonishing ruins and remains, in which may be seen stones of an unmeasurable greatness, so that men cannot conceive how they were cut and set in their places. Immense multitudes from all the provinces came to work upon them, and by dint of indefatigable labour alone could they have been accomplished. In finishing them, were used neither mortar, nor cement, neither had they iron, or steel, to cut and smooth the stone. They had no engines, or other instruments, to elevate them, and yet they were so artfully combined, that in many places the joints could not be seen; yet many of these stones are of an incredible magnitude, and I myself measured one thirty-eight foot long, eighteen broad, and six thick*. All this was done by the united force of men, who endured their labour with invincible patience†". Thus far this diligent and authentic historian, Joseph Acosta, who wrote and spoke from ocular demonstration. And, doubtless, the imperious despotism of princes, added to the fervent zeal inspired by religion, might accomplish a great deal, but at the same time it is not impossible that the original fabricators of this enormous pile might have been possessed of a portion of mechanical knowledge, to which their degenerate posterity were strangers.

---

* They were probably elevated to those vast heights in the same manner in which Diodorus informs us the massy stones of the Egyptian pyramids were raised to their places, by means *of terraces disposed on inclined planes.*

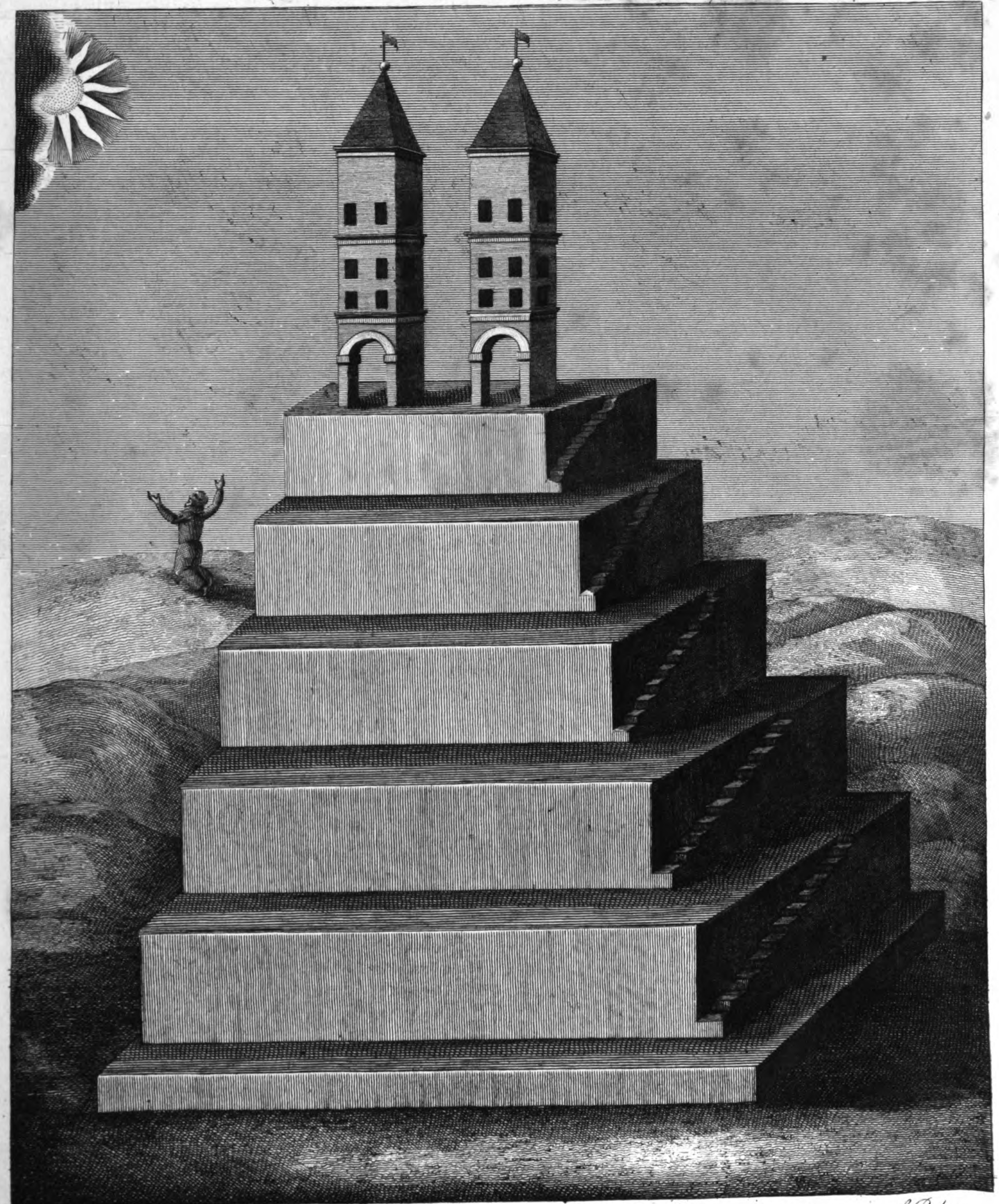
† Acosta, Hist. of the Indies, lib. vi. p. 459, 460.

A MEXICAN TEMPLE TO THE SUN AND MOON



This Mexican Shrine is very remarkable, because erected after the manner of the pyramidal temple of Belus at Babylon, and evidently proves in what country the Americans first caught the SABIAN SUPERSTITION

A MEXICAN TEMPLE TO THE SUN AND MOON



This Mexican Shrine is very remarkable, because erected after the manner of the pyramidal temple of Belus, at Babylon, and evidently proves in what country the Americans first caught the SABIAN SUPERSTITION

The Possibility stated of America having been visited, in very early Times, by the Phœnician and Carthaginian Navigators, who might communicate the Discovery to the Egyptians and Greeks.

Before I conclude these observations respecting the great western continent, I am induced, by the strong resemblance that subsists between the horrid rite, recently mentioned, of immolating infants on the Mexican shrine, and that practised in the temple of the Syrian or Phœnician goddess, in the manner related by Lucian, as well as by the similar sacrifices so notoriously in use among the Carthaginians, an emigrated colony from Phœnicia, to enlarge a little on that disputed subject, the first discovery of America by the inhabitants of the Asiatic and European continents. I have truly mentioned the Atlantis of Plato as an ingenious romance, especially when brought in connection with Grecian history, because it relates to a period when the Greeks, as a nation, did not exist; but of an antient and celebrated race of men, called Atlantii, mentioned so respectably in the fifth book of Diodorus Siculus, who contributed to colonize the infant world, and improve it with arts and sciences, neither the existence nor the achievements, though deeply obscured by fable and superstition, can reasonably be doubted. It is probable that Plato, when in Egypt, had learned, either from antient books then existing but since lost, or, traditionally, from the priests of Sais, many particulars concerning this famous race, which formed the basis of his Dissertation, of which many portions may be true, though the account of the island of Atlantis, as there given, may be fabulous. And certainly the information given by the Egyptian priests to Solon, that the island, called Atlantis, was larger than Africa and Asia joined toge-

ther, however vague may be that expression, conveys to the mind the idea of an immense continent rather than an island. The Atlantii were the offspring of that daring race of navigators,—

> ——— who first essay'd the deep,
> And wafted merchandize to realms unknown. DIONYSIUS.

Equally celebrated for their naval and martial feats, they were ranked among the gods by their adoring subjects, and not without some shadow of reason; for the gods of that age, it is well known, were only *deified mortals*. The origin and history of this adventurous tribe of heroes, this formidable Titanic race, the giants of Pagan antiquity, and the immediate descendants of those who, at Babel, *made war against heaven*, and were thence scattered widely over the face of the earth, must now, therefore, become the object, if not of extended investigation, at least of transient inquiry.

The hypothesis submitted to the reader in the preceding article,—*that*, I mean, which states the Great Western Continent to have been first peopled by colonies from the north-eastern extremities of Asia, is the hypothesis most easily to be comprehended, and the one most generally received. It appears to derive, also, great support from the well-known circumstance that those parts of America, that is, the western, which have an aspect towards Asia, have ever been by far the most populous. On that side, in fact, are situated the two great empires of Mexico and Peru; the one in its northern, the other in its southern, division. There are, however, many learned advocates for another, and not wholly improbable, hypothesis, which gives this distinction to the Phœnicians, so nearly related to the renowned Atlantii. Involved as are the annals of these most early periods in the darkest gloom of mythology, to come at any thing like truth and history, we

must, with daring ken, endeavour to penetrate that gloom, by which the character of no personage of antiquity is more obscured than that of their father ATLAS, according to the Phœnician antiquities of Sanchoniatho, the son of Uranus, and brother of Saturn: that is, he was the son of the *Heavens*, and brother of *Time*, a genealogy, so wholly mythological, that, were we not discoursing concerning that important personage who gave his name to the great Atlantic ocean, an object so much connected with our present investigation, we might safely pass his history over in absolute silence. Sanchoniatho, then, as reported by Eusebius from Philo-Byblius, represents Atlas as the first person who led a colony out of Phœnicia, and settled in the western parts of Africa*, where he devoted himself to the study of astronomy upon a high mountain, on which account he is said to have supported the heavens. He gave his name to this mountain, in Mauritania, and, say these romantic fabulists, he was himself at length metamorphosed into the very mountain, on whose summit he thus observed the celestial bodies. The adjoining ocean was called after him *æquor Atlanticum*, and from him, too, the seven *fortunate* or Canary islands adjoining, derived their classic appellation of *Atlanticæ insulæ*. His daughters, the Atlantides, were the pleiades, by which the antient mythical writers simply mean, that he discovered that constellation. They were his daughters, the daughters of his fertile imagination, for he first formed into a constellation the radiant group. The ATLANTII, his male progeny, according to Diodorus, first peopled western Africa and its adjacent islands. Their power was unbounded, their will unrestrained; they were, after Belus, the first legislators, and also the first tyrants, of the earth.

---

* Sanchoniatho, apud Eusebium, in Præp. Evang. p. 30.

The learned Hornius assigns to these ATLANTII the honour of being the earliest visitors of Columbia. He enumerates three distinct invasions of its shores by the antients; the first, by these African conquerors, of whom he speaks as actually reigning there, although their dynasty and all memory of them have perished amid the convulsions of nature, which have desolated that devoted country; and two others, in later ages, by the Phœnicians, and the Carthaginians. Primus adventus omnium antiquissimus ille est, in quo ATLANTES primas tulerunt, gens Africæ maxima et navigandi peritia celebris*. Of this first irruption no sufficient evidence from history is brought; of the two latter there exists something like historical proof.

Their immediate descendants of Phœnician origin, seated on the shores of the Mediterranean, and devoting their attention to the study of navigation, seem to have been the carriers both of superstition and of science to all the kingdoms of the earth. Impelled, too, by their situation on a narrow slip of land stretching along the shore of the Mediterranean Sea, between the 34th and 36th degree of northern latitude, and inhabiting a barren and ungrateful soil, they were obliged by unwearied industry to correct the deficiencies of nature, and by extensive commercial enterprizes to make the abundant wealth of distant nations and more fertile regions their own. Every where in Europe and Asia we find them planting colonies and founding cities, in the same manner as their adventurous progenitors, the ATLANTII, had done in Africa. The Phœnicians were, in fact, great warriors, great merchants, and great philosophers, accomplishments very seldom united in the same race of men. In *mathematical* science, as being such expert navigators, they particularly excelled, and we have before

---

* Hornius De Orig. Gent. Americ. lib. ii. cap. 6.

mentioned that to them all antiquity assigns the honour of inventing the *Cynosura*, or pole-star, called from them PHŒNICE. They made the finest glass, dyed the brightest purple, and wove the finest linen, denominated *Sindon*, from their principal city Sidon, where it was manufactured.

Emerging now from the very bosom of sidereal mythology, and from the abyss in which lies for ever submerged the Atlantis of Plato, with joy we at length arrive on the *terra firma* of authentic history, or, at least, on something like it, and find, about the time of Moses, according to Eusebius, cited by Bochart*, a second Phœnician colony emigrating under the Tyrian Hercules, and settling at Gades, Tartessa, and other places on the coast of Spain. At Gades, now Cadiz, after his decease, the descendants of that colony erected to his honour a superb temple, which was visited by Apollonius Tyanæus†, and is described with all its splendid ornaments, the golden belt of Teucer, and the golden olive of Pygmalion, bearing *smaragdine* fruit, by his learned biographer. — This account of the splendid gift of Pygmalion by the way deserves particular notice, as exhibiting a curious proof of the early skill of the Phœnicians in working in metals and gems. " Pygmalion, says Apollonius, sent to the temple of Hercules, standing in the island of Gades, a rich donative, being the figure of an olive-tree, of massive gold, and of most exquisite and curious workmanship; its berries, which were of emerald, bearing a wonderful resemblance to the fruit of that tree‡.

These, however, it should be remembered, were presents to that

---

* See Bocharti Canaan, p. 709, et preced.

† Philostrat. in vitâ Apolloni, lib. v. cap. i. p. 211, edit. Paris, 1608.

‡ Ibid, in loco citat.

temple of a date far inferior to that of the original edifice, offered by the ambitious Greeks, who wished to confound the Grecian with the Tyrian Hercules, by many centuries older. In that edifice we are expressly informed by Appian in *Ibericis*, that Hercules was worshipped not according to the Grecian, but solely according to the Phœnician, mode of adoration; that is, with the licentious and sanguinary rites of the Syrian or Sidonian Goddess*.

Thus situated, and in the direct tract that led towards America, we cannot wonder, if, by some of those accidents that attend on maritime adventures, these Phœnician wanderers should be driven against their inclination on the American shores.—History, in reality, announces the fact. "The *Phœnicians*," says Diodorus, "in the most antient times, sailing beyond the Pillars of Hercules, were driven by great tempests far into the ocean; and being tossed about in it for a long period by the violence of the storm, at length they arrived at a great island in the Atlantic ocean, which lies many days sail distant from Africa to the west. The soil was fruitful, the rivers navigable, and the buildings sumptuous†." The preceding account agrees, in general, so well with the country of America, that it is scarcely possible to apply it to any other place in the Atlantic ocean; although Cuba, Jamaica, and others, have been mentioned; but these islands were probably at that time uninhabited wastes. Such is the recorded fact; the reader must exert his own judgment respecting the credibility of the relation, and for placing any reliance at all on such authority as Sanchoniatho: if I have erred, it is not, on reflection, unpleasant to have erred in company with such men as Eusebius and Bishop Cum-

---

* Appiani Hist. lib. vii. sect. 1, edit. Stephens.
† Diod. Sic. lib. v. p. 299, edit. Rhod.

berland; the first of whom, as we have above intimated, has preserved for posterity the fragments of his history, while the latter has written learned, but rather fanciful, comments upon that history.

The Carthaginians, also, as we are informed by Aristotle de Mirabilibus, were reported in his time to have found, beyond the Pillars of Hercules, distant many days sail from the African continent, a vast but desert island, abounding in all kind of wood, and full of navigable rivers.

"Extra columnas Herculis, aiunt, in mari a Carthaginensibus insulam fertilem desertamque inventam, ut quæ tam sylvarum copia quam fluminibus navigationi idoneis abundet, cum reliquis fructibus floreat vehementer, distans à continente plurium dierum itinere*."

Aristotle further informs us, that, on account of the rich exuberance of the soil, the Carthaginians began to make numerous settlements upon the said island, until the magistrates of Carthage, fearing the consequences of so vast an emigration, forbad any persons going thither on pain of death†.

Hornius is of opinion, that all these facts tend decidedly to prove that the islands on the west of Africa, and the great American continent beyond them, were anciently known to the Phœnicians and Carthaginians, and through them to the Egyptians and Greeks. But he thinks the Carthaginian law, forbidding the farther emigration of their subjects thither, gave birth to the report, zealously encouraged and propagated by the policy of the government, that the whole country had been swallowed up by the ocean‡. This island§, he farther ac-

* Vide Aristotelis Opera, tom. iii. p. 395, edit. Basil, 1542

† Ibid.

‡ Hornius, in loco citat.

§ De Orig. Gent. Americ. lib. ii. cap. 7, p. 92.

quaints us, some have thought to be Hispaniola, but others have taken it for the country of Brasil, not then cultivated.

If, by similar tempests that wrecked the Tyrian vessels on the American shore, the Carthaginians were stranded on that coast, there can be little doubt of their having infected the Columbian world with the sanguinary principles and practice so predominant in their own country, and so frequent among a race who sacrificed such multitudes of human beings to the unrelenting SATURN. By Saturn, mentioned in these terms, the reader will scarcely suppose that it is my intention to designate the mild patriarchal sovereign, in whose *golden reign* Italy was once so supremely blest, but, as I firmly believe, that dark and malignant planet, who in the Indian mythology is seen riding on the ill-omened raven, and who, from his distant sphere, sheds pestilence and death on ill-fated mortals;—that Saturn, who, in his horrible rites, was so nearly allied to the Molock of the Chaldæans and Syrians; — that Saturn, finally, whom the Jews, in scripture, are accused of adoring under the name of *Remphan* and his sidereal symbol, *when they took up the tabernacle of Molock, and the star of their god Remphan,* Acts vii. 43. The tabernacle of Molock was a shrine carried about in procession, with the image of the deity placed within it, like *the silver shrines of Diana:* the commentators universally suppose Remphan and Saturn to be the same; the sun was the symbol of Molock, a star of uncommon effulgence the emblem of Saturn.

Antiquity has nothing to compare, in point of horror, except, indeed, in the instance of their druidical descendants in the British islands, with the nefarious rites practised at the shrines of these tremendous and blood-thirsty deities. The account given to us of the images by which they were respectively represented, will be sufficient to demonstrate the truth of this statement. That of Molock was a vast hollow statue of brass, containing, it is said, *seven different cells*

for the seven different kinds of oblations, in perfect consonance with the demand of Balaam for building seven altars, on which were to be sacrificed *seven* bullocks and *seven* rams. The six first of these cells were for farinaceous offerings, and the sacrifice of birds and beasts, as turtle-doves, calves, rams, &c.; but the seventh was reserved for the more precious and equally innocent human victim, which was therein (horrible to tell!) burned alive. According to Silius Italicus, it was their savage custom thus—

> Poscere cæde Deos veniam, ac flagrantibus aris
> (Infandum dictu) parvos imponere natos!

These *seven* different partitions bear so striking a resemblance to what has before been related of the *seven* gates of Mithra, that some connection may be suspected to have originally existed between the rites of those solar deities; the latter, however, were only intended to purify, but the former to consume, the miserable victim. It should seem, too, that in this as in some other instances before alluded to, the deity called Molock did not always represent the *sun*, but the *seven planets*. The image of Saturn, adored by the Carthaginians, was also a huge statue of brass, the palms of whose hands were extended in a bending posture towards the earth, after such a manner, that, when the devoted victim was placed in his arms, it immediately fell down headlong into the fiery furnace kindled at the feet of the idol, and was there consumed to ashes*. They carried this atrocity so far, that, according to the same writer, when vanquished by Agathocles, about 300 years before Christ, they sacrificed no less than 200 children of

* Diod. Sic. lib. xx. cap. 1, p. 740.

the prime nobility of Carthage to that gloomy deity; while 300 more infatuated youths, Diodorus adds, to save their country, voluntarily rushed into the consuming fire*. These patriotic youths surely deserved a better fate!

The colonies of Phœnicians and Carthaginians, who in every age traded to the Cassiterides for tin, undoubtedly introduced into this island, (as before intimated,) as well as into Gaul, the same dreadful rites. As I can say nothing more directly pertinent to this fact, and to those rites, than what is recorded of them in the INDIAN ANTIQUITIES, I hope I may be permitted, in this place, without the imputation of vanity, or undue partiality to a work, which, ranging through a wide circle of antiquarian investigation, seldom descends to ages below the commencement of the Christian æra, and cost the labour of above twenty years of a life, now rapidly declining, to close this head of Observations with a short extract from its pages.

"Concerning the sanguinary rites antiently practised by our Gaulic neighbours, no stronger evidence or more impressive relation can be given, than that by Lucan, of those celebrated in the Massilian grove, (Marseilles, colonized by Phœnicians,) which he describes as a place gloomy, damp, and scarcely penetrable; a grove in which no sylvan deity ever resided, no bird ever sang, no beast ever slumbered, no gentle zephyr ever played, nor even the lightning could rend a passage. It was a place of blood and horror, abounding with altars reeking with the gore of human victims, by which all the trunks of the lofty and eternal oaks, which composed it, were dyed of a crimson colour: a black and turbid water rolled through it in many a winding stream: no soul ever entered the forlorn abode, except the priest, who,

* Diod. Sic. ibid.

at noon, and at midnight, with paleness on his brow, and tremor in his step, went thither to celebrate the horrible mysteries in honour of that terrific deity whose aspect he yet dreaded more than death to behold.

"The British Druids, however, seem to have exceeded, if possible, even their Asiatic ancestors, in savage ferocity of soul and boundless lust of sacrificial blood. The pen of history trembles to relate the baleful orgies which their frantic superstition celebrated, when inclosing men, women, and children, in *one vast wicker image*, in the form of a *man;* and, filling it with every kind of combustibles, they set fire to the huge colossus. While the dreadful holocaust was offering to their sanguinary gods, the groans and shrieks of the consuming victims were drowned amidst shouts of barbarous triumph, and the air was rent, as in the Syrian temple of old, with the wild dissonance of martial music!—However incredible the conjecture, it is not without reason suspected that they sometimes proceeded to even more criminal lengths, and finished their horrid sacrifice with a still more horrid banquet. Religion shudders at such a perversion of its name and rites; and humanity turns with horror from the guilty scene*!"

Strictures on the Origin of Alphabetic Writing.

The hieroglyphic figures, mentioned in a preceding page, as delineated in colours on the bricks that formed the walls of the palace of Babylon, may be justly called a species of *writing*, the species earliest employed by mankind, which was symbolical — and in the *pictorial* style, like that of the Mexicans — and is at present in general use

---

* Ind. Antiq. vol. vi. p. 105, *et seq.*

among the nations of the earth least civilized. It was probably so at an early period, too, even among the polished people of Greece, since the word γραφω signifies both to *delineate* and to *write*. Admitting the book of Job to be of the early age generally assigned to it by Christian commentators, and the composition of the Hebrew legislator, it bears most decided attestation to the early progress of writing, and the mode of it, in the following passage. "*Oh! that my words were now* WRITTEN! *Oh! that they were printed in a* BOOK! *That they were* GRAVEN WITH AN IRON PEN AND LEAD, *in the rock for ever!*" Job xix. 23, 24. This mode of writing on sheets of metal, lead, brass, or copper, with an iron pen, succeeded to the primitive and more difficult mode of delineating on brick and marble. They were less perishable in their nature, and it will be recollected that to plates of brass and copper*, of late years dug up in India, but of far inferior antiquity to the work just mentioned, we are indebted for nearly all the authentic documents we possess of the most ancient history of that country. It is well known to the classical student that, in after ages, both Greeks and Romans for this purpose made use of tables of metal or ivory, overlaid with wax, *tabellæ ceratæ*, upon which they wrote, or rather engraved, their sentiments with a stylus of the same materials.

Semiramis is said by Diodorus to have received epistolary communications from a king of India, and to have caused an inscription to be cut in Syriac characters upon mount Bagisthan†. In Egypt, also, letters are said to have been invented and taught by the elder Hermes; but every thing concerning that character, and the period in

---

* See those plates respectively engraved in the various volumes of the Asiatic Researches.

† Diod. Sic. lib. ii. p. 127.

which he flourished, is so wrapt in mysterious obscurity, that no dependance can be placed upon the assertion. In respect to those fanciful theorists who will have him to be the same with Joseph, or Moses, they do little better than make those venerable and pious patriarchs the abettors of the grossest idolatry, since, according to Clemens, the ιερογλυφα γραμματα, or hieroglyphic letters, were only the *images of beasts*, the objects of the senseless adoration of the Egyptians; and the ιερα γραμματα were nothing more or less than the contractions of those hieroglyphics.

Alphabetic writing, if in any form it existed at that early period, was certainly not in common use in that country, and, in fact, seems not to have been employed, by any documents that have descended to us, either in state affairs, in the way of covenant in the disposal of landed property, in the concerns of merchandize, or in private transactions that would naturally call forth the frequent exercise of an art so useful in the concerns of social life. When Joseph, in his exalted station of minister to Pharoah, discovered himself to his brethren, and sent them back to his father, he gave them no written documents for him, but a *verbal message*, which he charged them faithfully to deliver. Upon so interesting an occasion, and with his boundless filial attachment to an aged and venerated parent, if any other than hieroglyphic characters had existed at that time in Egypt, it is natural to conjecture that he would have used them. Nor can it be supposed, that, had the Egyptians of that period once been acquainted with alphabetic writing, the knowledge of so useful an art could have been easily lost among a race in all other respects so learned. Mr. Bryant has urged this argument so strongly in the second volume of his Analysis, that I hope the reader will excuse my presenting him with a short extract from that volume.

" If the people of the first ages had been possessed of so valuable a secret, as that of writing, they would never have afterwards des-

cended to means less perfect for the explanation of their ideas. And it is to be observed, that the invention of hieroglyphics was certainly a discovery of the Chaldæans; and made use of in the first ages by the Egyptians; the very nations who are supposed to have been possessed of the superior and more perfect art. They might retain the former, when they became possessed of the latter; because their antient records were entrusted to hieroglyphics: but, had they been possessed of *letters* originally, they would never have deviated into the use of *symbols;* at least, for things which were to be published to the world, and commemorated for ages. Of their hieroglyphics we have samples without end in Egypt; both on obelisks, and in their syringes; as also upon their portals, and other buildings. Every mummy almost abounds with them. How comes it, if they had writing so early, that scarcely one specimen is handed down to us; but that every example should be in the least perfect character? For my part, I believe that there was no writing (he means *alphabetic writing*) antecedent to the law at mount Sinai. Here the divine art was promulgated; of which other nations partook; the Tyrians and Sidonians first, as they were the nearest to the fountain-head. And when this discovery became more known; even then, I imagine, that its progress was very slow; that in many countries, whither it was carried, it was but partially received, and made use of to no other purpose of consequence. The Romans carried their pretensions to letters pretty high; and the Helladian Greeks still higher; yet the former marked their years by a nail driven into a post; and the latter for some ages simply wrote down the names of the Olympic victors from Coræbus; and registered the priestesses of Argos*."

We read indeed of signets, with their inscriptions, at this early

* Analysis, vol. ii. p. 70.

period; for Pharoah put his signet on the hand of Joseph, but the characters inscribed upon them were probably for the most part of an hieroglyphic and symbolical cast, like those precious stones engraved with the figures of scarabæi, sphinxes, ibis's, serpents, &c. that have reached the present time, and are the delight of the existing race of mythologists.

When Laban and Jacob made their well-known covenant at Mizpah, on the piled heap of monumental stones, we read, indeed, of a *pillar set up*, but of no *inscription* upon it, Gen. xxxi. 49. When Joshua erected a similar memorial column of twelve stones at Gilgal, on purpose to record the miracle of Jordan passed through by the Israelites, dry shod, we read of no *inscription* upon that column, although it was intended to inform remotest posterity of the awful fact; Josh. v. 22. On the monuments recorded by Homer to have been erected by the ancient Greeks over their valiant heroes slain in battle, we find no inscription engraved; a column, or some other characteristic mark of distinction, is alone mentioned. Neither does that venerable bard, who flourished between eight and nine hundred years before Christ, mention any correspondence carried on by letter, or order given in writing, except in one solitary and very doubtful instance. It occurs in the sixth book of the Iliad, where Bellerophon is said to have carried a letter from Prætus, King of the Argives, to Jobates, his father-in-law, containing an order for the death of that prince. It is a point, however, extremely disputable, whether any kind of alphabetical writing was used in that letter, as it is called, for in the text of Homer is only to be found the vague word ϛηματα, signifying literally *marks* or *signs*, an expression consequently far more applicable to hieroglyphic, than alphabetic, delineation*. Let it also be remem-

* Iliad, lib. vi. ver. 168.

bered, as a fact *most important* in this investigation, as well as in a discussion which will immediately follow, concerning the venerable *Persepolitan remains,* that no letters whatever are to be found on the most ancient known coin—the GOLD DARICS OF PERSIA. But we are wandering from the point: Egypt and its literature are properly the subject under discussion; let us return to that land of mystery and hieroglyphics.

The system of Egyptian hieroglyphics was at first simple and intelligible enough, as described by Clemens*, when, to designate the sun, the priests drew a *circle;* the moon, a *crescent.* When the *air* was symbolized by *wings* that fanned it; and *water,* by undulating lines, resembling the zodiacal asterism of the month Aquarius, so frequently occurring on their monuments. When again they wanted to denote strength, or fortitude, they selected a *lion* for that purpose, a *bull* for agriculture, a *sphinx* for cunning, a *crocodile* for Egypt, a *ship* and *pilot,* or the *eye* and *sceptre,* for Osiris, the Lord of the Universe; him whose eye beholds, and whose sceptre commands, all things:—these, I say, were symbols sufficiently intelligible; but, when they came to unite in one heterogeneous image the parts of various animals, in order to represent different qualities combined in the same person or object,—as, for instance, beings intended for *human* with the heads of dogs, or lions, with the body only of a man, and the extremities of a fish—it became a system so extremely abstruse and complicated as to defy comprehension. Although the meaning of these compound symbolical figures, and the letters formed from them, might be fully known to the Egyptian hierophants themselves, they yet baffled, and it was perhaps intended they should baffle, all the efforts of inquisitive

* See Clem. Alex. Stromata, lib. v. p. 555, et seq. edit. Potter.

and learned foreigners of the Greek nation resident among them, to make themselves masters of the science. Nothing, in fact, short of the powers of an Œdipus could enable the wisest spectator to comprehend and decypher that vast mass of hieroglyphic delineation under which now lies for ever buried the mysterious learning of the ancient Egyptians.

Among the foreigners of that nation, then resident in Egypt, the two most celebrated were Pythagoras and Plato, and the philosophical dogmas promulgated by them, on their return to Greece, as well as their *mode* of promulgating them, affords very ample evidence of the fact. These great men were in Egypt, the former in the sixth century before Christ, and the latter in the fifth, when the Egyptian system of religion and philosophy still flourished in a high degree of vigour. Although they might not be able to penetrate into all the profound arcana of their mysterious erudition, these favoured disciples of the old Egyptian hierophants had seen enough of their ænigmatical learning to transport back with them into Greece the same symbolical mode of instruction. Porphyry, indeed, very appositely to the system adopted in these pages, tells us, that the former of these philosophers, during his various travels through Asia and Africa, learned *arithmetic* from the Phœnicians, *geometry* from the Egyptians, *astronomy* from the Chaldæans, and *theology* from the Persians*. And that what is here recorded, relative to his attachment to the mysterious *mode of dogmatizing* in Egypt, is founded on fact, may be proved from this circumstance, that, on his return to Samos, after a residence of two-and-twenty years in that country, though he erected a school for the public study of

* In vitâ Pythag. p. 182, edit. Cantab.

philosophy within the city, yet he himself resided without the city in a cavern, where he delivered his more mystical and profound discourses; after the very same manner in which the more deep and recondite sciences of Egypt were alone taught, by her sequestered sacerdotal tribe, amid the gloomy adyta and subterraneous grottoes of the Thebais.

In regard to PLATO, we cannot but attribute to the same cause that spirit of mysticism which pervades the whole of his sublimely obscure theology, as well as that devotion to the favorite science of the Egyptians, which dictated the motto inscribed in large characters over the academy: "*Let none ignorant of geometry enter this place.*" Plato, too, when in Egypt, had, undoubtedly, met with certain persons well skilled in the Mosaic writings and history, probably with some of the Hebrew rabbies themselves, from whom he had obtained that information respecting their theological code and singular institutions, so evident in the dogmas of the Platonic school. Indeed, with the higher order of that persecuted people, who, about this period of their dispersion, flocked into Egypt, he could scarcely fail of frequently conversing, in order to penetrate into their sacred records and mystic cabbala, so famous, but so little understood, throughout Asia. The best evidence of this fact is to be found in his writings, where are to be met with such repeated allusions to what he denominates παλαιοι λογοι, antient discourses, or traditions, and certain Συριοι και Φοινικοι μυθοι, or Syrian and Phœnician fables, as he calls them, the Jews being frequently confounded with these people, that it is impossible not to consider this philosopher as deeply conversant in Hebrew antiquities. The fact, indeed, was so evident to Numenius, a Pythagorean philosopher of the second century, that, according to Clemens Alexandrinus, he

exclaimed, Τι γαρ ἐςι Πλατων, ἡ Μωσης Ἀττικιζων; What is Plato, but Moses conversing in the language of Athens?*

To return from this short digression to the important subject under discussion, there can be no doubt, from the fragments above alluded to, and what Herodotus has told us concerning the Egyptians having had two sorts of letters, the one *sacred*, and the other *vulgar*, (Herodot. lib. ii. cap. 36,) that they had in use, though sparingly employed, a species of *literal* character; and the author (Montfaucon) who has preserved those fragments, and endeavoured, of all others, most successfully to explain them, gives us an account of the matter in the Supplement to his Antiquities, of which this is the substance.

The inscription, which he has engraved in the 52d plate of his Supplement, is an Egyptian calendar; it was copied from the covering of a mummy. The characters are arranged in twelve columns, surmounted each with an *hieroglyphic figure*, probably of the Deity, presiding over each respective month, and of course decisively marking the origin of those characters. It is written in the Coptic or ancient Egyptian character, which character, formed from the hieroglyphic, he says, after Alexander's conquest of Egypt, they *laid aside*, and took those of the Greeks; still preserving the ancient Egyptian language, and using only the Greek letters to express their own sounds. But, as the *twenty-four* Greek characters were not sufficient to express all the Egyptian words, they added to them *eight* of their own characters, for the Coptic language has *thirty-two* letters in its alphabet, as may be seen in the Palæographia

* Clem. Alex. Stromat. lib i. p. 411, edit. Oxon.

Græca, and this accounts for the frequent mixture of Coptic with Greek letters. Little now, he informs us, remains of the ancient Coptic, except the Bible and some ecclesiastical manuscripts; but the character is in a great degree changed, and has assumed a Grecian form. It is rather a singular circumstance, that in various parts of this inscription certain numerical characters occur, particularly the figures 2, 3, 4; and in some columns, as, for instance, at the sixth, we read distinctly from the right to the left (which was their manner of writing) 443, 112, and 431. Mountfaucon, however, is of opinion, that this has happened from mere chance*.

The wise Plato, in his Cratylus, declares it to be his opinion, that the gods were the authors of the *first letters*†, and expressly asserts that the Greeks received their language from certain barbarians more ancient than themselves, by which he is generally thought to mean the Phœnicians, of whom the poet thus speaks:

> Phœnices primi, famæ si credimus, ausi
> *Mansuram* rudibus vocem signare figuris:
>
> LUCAN.

those Phœnicians, who, about the time of Joshua, emigrating from the eastern coast of the Mediterranean, under their chieftain, Cadmus, first settled themselves at Thebes, in Bœotia. Pliny tells us these letters were at first only *sixteen* in number; but that, about the time of the Trojan war, Palamedes added *four* new letters, and afterwards Simonides added *four more,* which completed the Greek

---

* Supplement, vol. ii. chap. vii. p. 236.

† Plato in Cratylo, p. 426, edit. Stephens.

alphabet*. The sixteen original Cadmean letters were these following,

A, B, Γ, Δ, E, I, K, Λ, M, N, O, Π, P, S, T, Υ.

The Palamedean letters, according to the same author, were Θ, Ξ, Φ, X; and those invented by Simonides were Z, H, Ψ, Ω.

On this subject it has been judiciously remarked by Scaliger†, that the *Hebrew*, the *Samaritan*, the *Syriac*, and the *Greek* alphabets, seem to have had but one author, since their respective letters follow each other in the same order, having the same numeral as well as vocal powers, (for which no other sufficient cause than imitation can be assigned) with such an agreement in the forms of *some* characters, and the names of *all*, as to render it highly probable that they were but transcripts of the same original. But what, it will be asked, is that original language? and the answer of every reflecting Christian scholar, who shall have duly weighed this important subject, and all the circumstances of the case, is, that it *must* have been the HEBREW—the HEBREW in its most ancient and pure character, as known to and spoken by the Jewish nation *before* the Babylonian captivity. I am induced to use this decisive language by the following passages in Exodus, which I think *unanswerable*.

"And the Lord said unto Moses, come up to me into the Mount, and be there; and I will give thee tables of stone, and a law, and commandments, WHICH I HAVE WRITTEN." Exod. xxiv. 12.

---

* Literas semper arbitror Assyrias fuisse, sed alii apud Ægyptios a *Mercurio* ut Gellius, alii apud *Syros* repertas volunt; utique in Græciam intulisse e Phœnice *Cadmum* sedecim numero, quibus Trojano bello *Palamedem* adjecisse quatuor hac figurâ Θ, Ξ, Φ, X, totidem post eum *Simonidem* melicum Z, H, Ψ, Ω, quarum omnium vis in nostris recognoscitur.—Plinii Nat. Hist. lib. vii. cap. 56.

† Scaliger Animad. in Euseb. Chron. p. 103.

"And he gave unto Moses, when he had made an end of communing with him upon Mount Sinai, two tables of testimony, tables of stone, WRITTEN WITH THE FINGER OF GOD." Exod. xxxi. 18.

"AND THE TABLES WERE THE WORK OF GOD, AND THE WRITING WAS THE WRITING OF GOD, GRAVEN UPON THE TABLES." Exod. xxxii. 16.

It may be remarked, in support of this hypothesis, if it want any, that *every letter of the Hebrew alphabet*, except ט, which, like the Grecian Θ, was not required to its completion, is contained within the decalogue, written upon the tables of stone. Another circumstance, of the utmost importance in this investigation, is, that the Hebrew language is *perfect in itself*; it borrows nothing from other tongues, although other tongues borrow largely from it. This, therefore, it is highly probable, was that primordial language which once prevailed over the face of the whole earth, till, at the fatal catastrophe at Babel, in order to accomplish the great designs of Providence, it was broken into a multiplicity of dialects; and indeed, the most learned men of every age, at least in the Christian world, with very few exceptions, have decidedly joined in opinion with that eminent scholar, to whom, on all disquisitions of this abstruse kind, I am proud to own my obligations —to BOCHART; *Linguam Hebraicam omnium linguarum esse* MATRICEM*. It will be observed here by the candid reader, that all kinds of epistolary or historic writing, in those remote ages, is by no means meant to be denied. Some sort of σηματα, marks or cha-

* Consult, on this curious subject, Bochart. Geog. Sac. p. 451, and Scalig. Animad. ad Chron. Euseb. p. 103, 104; and Montfauc. Palæograph. Gr. p. 121, 122, 123.

racters, necessary to record important events, the most antient people, doubtless, employed; but of alphabetical letters, formed into a systematic arrangement, like our own, they were for many ages ignorant, as indeed are innumerable nations at this day, and among others may be particularly mentioned that great commercial nation, the CHINESE. Of such characters we cannot but suppose the impressions on the Babylonian bricks and the Persepolitan columns to consist; but that mysterious subject will be more particularly considered under the subsequent head of Observations.

It was absolutely necessary to a race, who had been so long conversant with the symbols, and the symbolical mode of worship, of the Egyptians; who had so often seen that idolatrous people kneeling before the sculptured figures of the god Apis, the god Horus, and other deities represented by the consecrated animals of that country, and of which, or the contractions of which, the genuine Egyptian alphabet was formed—that every thing connected with that symbolical worship should be removed from their eyes. That necessity will be still more apparent, when it is considered how deeply they themselves, when in Egypt, had drank at the same baleful fountain of superstition; and, after having witnessed the stupendous miracle of the divided sea, and others as awful in the desart, had, in the absence of Moses, compelled Aaron to make them a *golden calf*, for the purpose of performing adoration to it in the very spirit of their late oppressors. To remove every temptation to repeat this offence, the Hebrews were expressly forbidden to make any similitude or symbol of God, by the graven or molten image of any animal residing in the earth, air, or water; and it has been urged, with the greatest probability and ingenuity, that an alphabetic character was, THEREFORE, AT THIS JUNCTURE, formed

under *divine influence*, for their use, by the Hebrew legislator, and substituted for that so objectionably compounded of symbolic animals and their parts.

This idea of the *divine origin of letters*, we may gather from Plato, cited above, was not deemed irrational even in the Pagan world; and why then should it be rejected as incredible in the Christian? In addition to, and in corroboration of, the assertion of Plato, I shall now add, on the indisputable authority of Sir W. Jones, that the opinion of that great philosopher is remarkably consonant with the established doctrine of the Hindoos, who believe that the original, or DEVANAGARA, characters, in which their language is written, "were revealed to them by the *Deity himself, who prescribed the artificial order of them by a* VOICE FROM HEAVEN*." On the same authority, also, it may be stated, that MAHABAD, the first great prince and legislator of the Persians, received from the Creator, and promulgated among men, *a sacred book in a heavenly language*, consisting of regulations, or divine ordinances, for the practice of all religious and moral duties†. This coincidence of sentiment, this strong additional testimony, derived from a quarter whence the truths of Revelation have often been most vigorously assailed, will, it is hoped, have a due effect upon the judgment of the reader in weighing the evidence here submitted to him respecting the asserted divine inspiration of alphabetic writing.

This important, this unspeakable boon, thus beneficently conferred by Providence on the human race, was, according to the best informed writers on the subject, shortly after the conquest of Canaan by Joshua, communicated to the nations bordering on the eastern coast of the

---

* Sir W. Jones in Asiatic Research. vol. i. p. 423, Lond. 4to edit.

† Asiatic Research. vol. ii. p. 59.

Mediterranean, and in particular to the Syrians, who were the near neighbours of the Hebrews, and indeed were often confounded with them. These imparted them to the Phœnicians, by whom they were subsequently propagated through Greece, and afterwards, by the Pelasgic colonies, diffused through Italy and Europe. An examination of the most ancient Greek letters, compared with the oldest letters of the Phœnician alphabet, as given by Scaliger, and copied from him by Dr. Shuckford*, will shew their great resemblance in point of form, and prove the one to be a copy from the other. This resemblance must have been greater still when the Greeks wrote in the manner of the Phœnicians, from the right hand to the left, which they continued to do till the Βϛροφηδον method of writing, or in returning lines, as oxen plough, was adopted by them; a specimen of which method may be seen in the famous Sigæan inscription, engraved about the year 560 before Christ, and inserted in the authentic volume just cited.

This singular method of writing, from the left hand to the right, and backward again from the right hand to the left, alternately, is said to have been first dictated by a superstitious veneration for the consecrated *heifer*, which conducted Cadmus to Thebes, and there *stopped*; on which spot, (that is, where the animal reposed,) the Delphic oracle had previously ordered him to build a city. But this mode of writing being found inconvenient, and, from the same letter being turned in one line forward, and in another backward, the eye being offended, it was after some time relinquished. It is remarkable, that perhaps, with a view to this Βϛροφηδον, or furrowed, method of writing, and to avoid thus offending the eye, the four letters above mentioned as being in-

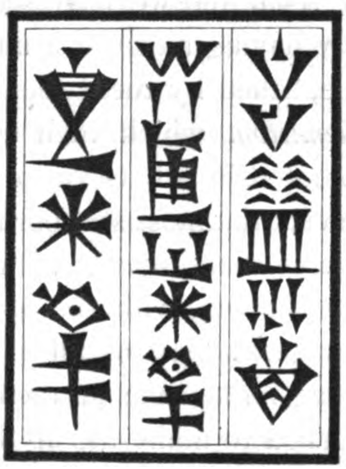
* See Shuckford's Connection, vol. i. p. 255.

vented by Palamedes, Θ, Ξ, Φ, X, and the remaining four by Simonides, Z, H, Ψ, Ω, are so contrived as to present the same aspect to the reader, whether written backward or forward. The Ionians, according to Herodotus in Terpsychore, were by no means backward in acknowledging their obligations to Cadmus, and owned their letters to be of Phœnician origin; but between the Phœnician, the Syrian, the Chaldaic, the Samaritan, and the Hebrew, there prevails such a general feature of resemblance, as to induce many eminent scholars to suppose the former were all dialects of the latter great primeval language.

The above is the system on this subject adopted by many learned and ingenious men, and which to me appears most probable, though by many others, equally learned and ingenious, a different hypothesis, viz. that which gives to the alphabet an Egyptian origin, and makes Cadmus himself a native of Egypt, has been strenuously advocated. I have collected very ample materials for a full investigation of this matter, which, in due time, may possibly be submitted to the public.

There is no occasion, however, in *this place*, for our engaging more at large in the discussion of this intricate question, or wandering farther into a wilderness of conjecture, without any hope of penetrating, after the minutest investigation, as *mere scholars*, into the real origin of an art which is lost in the abyss of time; and which, if not really invented by Moses, the presumed author of the book of Job, we are utterly at a loss to know to whom to ascribe the wonderful discovery; for the legends respecting the pillars of Hermes and the sons of Seth seem to be equally fabulous. In this state of uncertainty, the mode of conduct for us to pursue, at once the most consistent with reason, the most conformable to true science, and the most agreeable to sound religion, is to conclude, that, though some sort of characters, as before observed, formed by the ingenuity of man, or founded upon the basis of the ancient hieroglyphic system, was occasionally used in the ancient

world, that so *divine an art*, an art apparently so far surpassing human powers to invent, as ALPHABETIC WRITING, in the perfection in which it has descended down to us from an Asiatic source, through the medium of the Greeks and Romans, could have its origin in *inspiration only*, and was first revealed to man amid the awful promulgations at HOREB,—amid the thunders that shook the basis of Mount SINAI !!!



Persepolitan Characters.

Additional Observations on the Babylonian Bricks, and their inscriptions; the former compared with those of the brick pyramids at Saccara, in Egypt, the latter with the inscriptions at Persepolis, or Chelminar.

We have now taken as extensive a survey of this wonderful people, the Chaldæans, and their as wonderful works, as the scanty materials descended down to us from antiquity would allow of. We have noticed their early and rapid progress in *astronomy*, in which science they soon became the masters of Asia, and we have seen that even the Greeks were their scholars, they having received from them the knowledge of the Saros, or that cycle, called by them the Metonic; their intimate acquaintance with *chemistry*, which their extreme devotion to fire-worship so greatly promoted in all its various branches, particularly the fusion of metals, even the most stubborn; their high proficiency in *architectural* and *mechanical* science; in the art of *enamelling*, *painting*, *gilding*, and *colouring*, with the most brilliant and lasting dies. In *sculpture* they seem least of all to have excelled, and the reason is obvious; having no marble in their own country to work upon, they were compelled to make use of the same rude substance, the baked brick and bitumen of which the walls were composed, to form the symbolic images which were the object of their idolatrous veneration; and in fashioning such unpropitious materials into the form of animate beings, no great elegance could be arrived at, nor spirit displayed in the design. For the same reason, also, and from the utter deficiency of timber in that country proper for building, the praise of massy magnificence alone could be allowed to them; for, says Mr. Rich, the place of the ornamental column "appears to have

been supplied by thick piers, buttresses, and pilasters; since to the posts of date-wood, which was then and is still made great use of in the architecture of this country, the name of *pillar* certainly cannot with propriety be applied."

All these considerations, however, important as they are, sink before the peculiar and important object of this inquiry, the *Tower of Babel*, that TEMPLE OF THE SUN, that college of philosophical priests, whence the light of science, though shaded by superstition, was diffused through Asia and all the habitable world. With a few additional particulars respecting that desolated structure, the wonderful materials with which it was built, the sun-dried and furnace-baked BRICKS, and their still more wonderful INSCRIPTIONS, together with a subject deeply connected with ALL, — the remaining monuments of Asiatic glory at Istakhar, I shall conclude these extended observations.

Since the period at which the MUJELIBE, that "mountain of ruins," as he terms it, was seen by Della Valle, or exactly 200 years ago, owing to the injuries of time and weather, its towering height, which the reader will recollect he had mentioned as exceeding that of the highest palace in Naples, seems to have considerably decreased, for *then* its altitude was 200 feet, and the base, including the ruins of surrounding buildings, extended between 600 and 700 feet on each side. Mr. Rich gives the total circumference at present of that base as 2111 feet, and its height as 140 only. The size of the bricks that compose the centre of the building, being dried in the sun, or rather, as we may say, baked in the intense solar heat of that region, are larger than those that externally incrusted and strengthened it, which were burned in the furnace. That particular brick which Major Rennel saw at the British Museum, and has described at page 381 of his work on Herodotus, is one of those *sun-dried* bricks, and was not directly brought hither from Babylon, but from AGGARKUFF, a vast and ruinous pile, near Bagdad, once thought to be, and still absurdly

denominated by European travellers, the *Tower of Babel*, but undoubtedly built of genuine Babylonian bricks.

This building of Aggarkuff, from its having been so long considered as the real tower of Babel, deserves more particular mention to be made of it in these pages. Mr. Ives saw and minutely examined it, so late as in 1758. It stands, sublime and solitary, on a plain about 9 miles from Bagdad, amidst masses of ruined buildings that extend the whole length of the way from Bagdad, and which are supposed to be the remains of the antient Seleucia. The height of this ruin, in its present state, he gives as 126 feet; the diameter of the largest and central part as about 100 feet. Near the summit there is a regular aperture of an oval form; it appears to have been a window. The circumference of that part of the tower which remains above the rubbish he states at 300 feet, but intimates that, could the foundation be got at, it would be considerably larger: possibly it was 100 feet square. These inferior dimensions, however, prove that it could never have been the real tower of Babylon, and he judiciously conjectures that it was either a BEACON constructed by some Arabian prince to give notice of an approaching enemy, or, what is still more probable, an antient OBSERVATORY. The bricks, of which it is composed, are all twelve inches and a half square and four and a half thick, cemented together by a bituminous substance abounding plentifully in the neighbourhood, and intermixed with layers of reeds. Between Bagdad and Kircoote, he says, there are two fountains of bitumen which come boiling hot out of the earth, and this is thought to have been the *slime* mentioned in scripture. Mr. Ives calculates the visible ruins of Aggarkuff as a mass of about 100,000 cubic feet. A print of it is given opposite the page in his volume containing this description*.

* See Ives's voyage and travels in Persia, p. 298. edit. quarto, 1773.

The exact dimensions of the sun-dried brick, examined by Major Rennel, before the presentation to the Museum of the two other *kiln-burned* bricks from Hellah, as given by himself, are $12\frac{3}{4}$ inches by $12\frac{1}{2}$ square, and $4\frac{1}{2}$ inches in thickness. Remnants of broken reeds appear, at intervals, in many parts of it, but there is no inscription upon it: it is now evidently in a state of rapid decomposition. The other two bricks in this Museum that have been burned in the kiln, and have inscriptions upon them nearly similar, are considerably less in size, being only a foot square, and three inches in thickness, in order, I presume, that they might be the more effectually penetrated by the intenseness of the fire, which will be found to have evn vitrified a portion of one of them, if its edge be examined.

The CHARACTERS inscribed upon these bricks have a remarkable resemblance to those that are engraved upon the columns and pilasters at Persepolis; a circumstance which seems to prove a near affinity between these two most ancient nations, and certainly affords a strong additional argument for the high antiquity of those superb ruins. I had intended to present my readers with engraved specimens of a variety of these bricks, of which there are several in the different private and public collections of this country, and of which some bear the impressions of animals upon their surface, doubtless *stamped* upon them, as were the characters, when the substance was in a humid state. Having, however, been informed that such specimens are engraving for another work, the editor of which, being a celebrated orientalist, may probably throw more light upon them than I am conscious of being able to do, I willingly declined the expense; well knowing, from a long career of authorship, how burthensome these ornamental designs prove, as well as how useless, when their occult meaning cannot be fathomed, or sometimes even remotely guessed at. I have, however, to gratify excited curiosity, caused the inscription on one of our bricks

(that which was most perfect) to be engraved on the same plate with the characters copied by Chardin from the walls at Chelminar, by which the near resemblance, both in form and arrangement, of the two characters, will be demonstrated, though their mystic allusion will, perhaps, ever remain inscrutable.

The sun-dried brick of Babylon, it has been remarked, was rather of large dimensions, but those of many of the bricks, of which the pyramids at Saccara in Egypt, were constructed, were considerably larger. Herodotus has left on record the process of making these Egyptian bricks, which, he says, was done by striking the slimy bottom of the lake Mœris, after the inundation of the Nile had subsided, with long poles, by which means they collected in great abundance the mire and mud that adhered to them, and of which the bricks, intermixed with layers of straw and baked in the solar heat, were formed*. The imposts on the bricks thus made seem to have formed no inconsiderable a part of the revenue of the ancient Egyptian sovereigns: the laborious fabrication of them was the work of the captives and bondsmen; and nothing more decisively marks the atrocious despotism of Pharoah towards the Israelites, than his denying to them straw, yet still exacting the customary *tale of bricks* from that oppressed people†.

Both Pococke and Norden visited and examined the Saccara pyramids, erected amid the sands of the Lybian Egypt. *They* were built, also, of unburnt brick, and are perhaps of superior antiquity to those of Memphis. Pococke describes those bricks exactly as Herodotus did anciently, as formed of a miry substance and mixed with chopped

* Herodotus, lib. ii. sect. 136.
† Exodus, cap. v. ver. 7, 18.

straw, in order to bind the mass together, in the manner, he adds, "after which they now make unburnt bricks in Egypt, and many other eastern parts, which they use very much in all their edifices." He found some of those bricks 13½ inches long, 6½ broad, and 4 inches thick; while others, again, were 15 inches long, 7 broad, and 4¾ thick. They were without any inscriptions*.

"Besides the bricks with inscriptions, which I have mentioned," says M. Beauchamp, "there are found here solid cylinders, three inches in diameter, of a white substance, covered with very small writing, resembling the inscriptions of Persepolis, mentioned by Chardin. Four years ago I saw one; but I was not eager to procure it, as I was assured that they were very common. I mentioned them to the master-mason, who told me that he sometimes found such, but left them amongst the rubbish as useless. Black stones, which have inscriptions engraved on them, are also met with. These, I was told, were found at Broussa, (the ancient Borsippa,) which is separated from Makloube by the river." The same sort of cylindric fragments, with inscriptions upon them, bearing a great similitude, as M. Beauchamp justly observes, to those on the Babel bricks, is also found in great abundance among the ruins of Persepolis, many of which have been engraved together with their characters by M. Raspe, who notices their peculiar resemblance in many respects to those of CHINA, and those known in Ireland by the name of OGHAM†; an observation which will merit some attention hereafter.

Of the celebrated Persepolitan remains, just mentioned, I shall be pardoned for at once declaring my humble, but decided, opinion, that

---

* Pococke's Travels, vol. i. p. 53.

† See vol. i. p. 63. of Tassie's "Engraved Gems."

the antiquity of, at least, the greater part of them goes back to a much higher period in the history of the world than is generally supposed, and was, probably, nearly coeval with our *fire worshippers* of Chaldæa; for the kindred addiction of the Persians, though in a mitigated degree, to that superstition, long before the age of Zoroaster, is evidently demonstrated by the sculptured figures of their antient sovereigns, pourtrayed among these ruins, and those at NAXI RUSTAN in the neighbourhood, either kneeling, or standing in a suppliant posture, before the engraved symbols of those two leading Babylonian deities the SUN and FIRE. The great distinction between their mode of worship, so strenuously insisted upon by Dr. Hyde, has already been repeatedly pointed out, viz. that the Persians professed to use no images in their adoration, for the slight symbolic delineation of the sun and fire upon the wall of a cavern, to fix their attention, which that author contends, was all their aim in making them, upon the ALMIGHTY POWER who created both, can hardly, he thinks, be called by that name; while the Assyrian ignicolists used them perpetually, profusely, and in vast variety. These symbolic delineations, however, of the sun and fire upon the walls of Persepolis, before which the just mentioned figures are represented as kneeling, or standing in a suppliant attitude, with all due deference to Dr. Hyde, cannot be considered otherwise than as *images*, and were therefore in all probability placed there before the time of Zoroaster, who flourished in the reign of Darius Hystaspes, and whom that reformist attended in his visit to the Brahmins in their cavern recesses in Upper India.

The general idea among antiquaries, founded on the information of Diodorus, that this edifice was constructed by Cambyses, after his invasion of Egypt, and assisted by Egyptian architects, his captives in war, may in part be true, and is in a great measure proved by the ornamental sculptures introduced, among which may be conspicuously

observed the *winged globe and the sphinxes*, symbols so peculiar to Egypt; but it is more probable that Cambyses only *completed* and *enlarged* works of such stupendous labour as must have cost the toil of ages to construct; ages, the records of which are now sunk in eternal oblivion! For this deplorable ignorance, in regard to the history of these wonderful ruins, the only reasonable way of accounting is, the utter loss or destruction (probably by their Grecian and Mahommedan conquerors) of the antient Persian archives, so that, before the time of Xenophon, we have no genuine historical knowledge of that ingenious people.

The reader will probably think it rather singular in me to refer to Ælian, a writer on natural history in the reign of Hadrian, for any decisive intelligence relative to Persepolis; and yet that writer, from whatever quarter he obtained his information, relates what appears to approach nearer to truth than any of the preceding accounts, viz. that this vast edifice was constructed by CYRUS, the founder of the Persian monarchy. His words are, "Cyrus the great, or the elder, became renowned for the famous palace which he constructed at Persepolis, *of which he laid the foundations*; Darius, for that built by him at Susa; and the younger Cyrus, for the pleasant gardens which he had himself planted and cultivated in Lydia*." Thus we see, while some writers are for referring the erection of these monuments to Cambyses, and some to Darius Hystaspes, this better-informed author is for carrying the æra of their fabrication as high at least as the regular classical History of Persia will allow of, even to that Cyrus, who, according to the Greeks, founded the Persian monarchy in the sixth century before Christ. Down to the time of that prince it is barely

* Ælian, cap. 59, p. 62, edit. Gronovii, 1744.

possible that the antient Babylonian characters might have remained in use in that part of Asia; and this circumstance will better account for those characters appearing on its monumental remains than any other hypothesis yet submitted to the public. However, the words "*laid the foundations*" may not be precisely true of even the great Cyrus himself, and the evidence to be met with in the ruins themselves may justify us, if, in spite of these classical authorities, we assign to their original construction a far higher date among the antiquities of Asia.

THE HIGH ANTIQUITY OF THE EDIFICE OF PERSEPOLIS, OR CHELMINAR, PROVED FROM THE INTERNAL EVIDENCE AFFORDED BY THE EXISTING RUINS.

What the natives, from antient traditions, assert concerning the æra of the fabrication of these monuments, though this kind of traditionary information is seldom to be relied on, may yet, in this instance, approach somewhat nearly to the truth. They affirm them to have been founded by Jemshid, the fifth monarch, according to Mirkhond the Persian historian, of the Pishdadian dynasty, a prince not less illustrious in arms than renowned for his love and protection of the sciences, and, in particular, of astronomy, in which he was an *adept*, and shewed himself to be so by reforming the antient calendar of Persia. Hence the Persian appellation of these ruins is TAKHTI JEMSHID, or *the throne of Jemshid*. The scientific, but sceptical, M. Bailli, indeed, by an astronomical calculation, fixes the foundation of Istakhar, or Persepolis, at the remote and incredible date of 3209 years before the Christian æra, at which period, he informs us, the sun entered into the constellation of ARIES; and that, in memory of this great event, medals of gold were struck, with the head of the RAM

engraved upon them, and were annually presented to Jemshid, the founder, on the great festival of the NAURUZ, or New Year's day, in Persia*. M. D'Ancarville, not less sceptically inclined, confirms this account in the third volume of his "Recherches," and has, at the same time, given us an engraving of the medal in question, on one of his plates, illustrative of the ruins of Persepolis, but these are, doubtless, great exaggerations; though, for the original founder of Istakhar, I again assert, we ought to refer back to the oldest race of Persian sovereigns acknowledged in the annals of the authentic history of Asia. The custom, however, of presenting gold and silver coin on the Nauruz, we know, was preserved from age to age, through all the imperial dynasties of Persia; it was in periods comparatively recent practised by those Indian monarchs who were of Persian descent, and, in another dynasty, gave birth to the splendid annual ceremony of weighing the Mogul against gold and silver, of which Sir Thomas Roe in his journal has given such a particular and entertaining an account†.

About the period of Della Valle's visit to Hellah, our countryman, Sir Thomas Herbert, was engaged in exploring these venerable Persepolitan ruins, which are situated about thirty miles from Schiras, to the neighbourhood of which city, he hints, the antient Persepolis might have extended. Of Chelminar's *forty columns*, which the name imports, he relates, that only nineteen then remained entire‡, but that the "ruins and bases of at least eighty more, of vast dimensions, were visible," all composed of white and black marble, placed alternately upon a lofty artificial terrace, also of marble, which is

---

* See Bailli's Astron. Ancienne, p. 354, and D'Ancarville, vol. iii. p. 115.

† See Sir Thomas Roe's Journal, in Harris's Voyages, vol. i. p. 626.

‡ See Sir Thomas Herbert's Travels in Persia and India, p. 57, edit. London, 1634.

ascended by 95 steps, so broad, that a dozen horsemen may conveniently ride up abreast together. It is unnecessary for me, in this place, to enter into any extensive details concerning a place so well known, from the more ample accounts and illustrative plates of Chardin, Le Brun, and other later travellers, some of which will hereafter engage our attention; I have mentioned Herbert thus particularly, merely to notice, that at the period of his visit, in A. D. 1626, to these august remains, there were to be seen (what is recorded by no other traveller) very evident traces of the painting and gilding that once adorned the sculptured figures on the walls and cornishes of the structure, so similar to those observed by Norden, in Egypt. "The walls," he says, "are rarely engraven with images of gigantic stature, and have been illustrated with gold, which in some places is still visible; the stones of black marble, in many parts, are so highly polished, that they equal for brightness a steel mirror," p. 59. The characters inscribed upon them have nothing of the Egyptian hieroglyphic stamp; they have apparently no connection with any alphabet known to us, and must be referred to a common origin with those at Babel, which they so greatly resemble. Mandesloe, who travelled this way a few years later than Herbert, but long before Chardin and Le Brun, gives this account of them. "Near these chambers may be seen, engraven upon a square marble tablet, certain unknown characters, which have nothing in common with either the Greek, Hebrew, or Arabian, nor indeed with any other language. There are twelve lines of these characters, which, in respect to their figure, are *triangular*, *pyramidal*, or like *obelisks;* but so well graven and so proportionate, that those who wrote them cannot be esteemed barbarians. Some believe they are talismans, and contain certain secrets which Time alone can discover*."

---

* Mandesloe's Persian Travels, p. 5, edit. folio, 1662.

Of the pomp displayed at the Nauruz festival of Persia, above alluded to, the figures in procession delineated on the walls, some carrying in their hands vases of the precious metals, others rich gems and coined money, for of such articles only did the costly offerings of that day consist—others armed with shields and spears; illustrious chieftains, clad in martial habiliments; and noble satraps, arrayed in the long robes worn by the more antient race of Medes and Persians, as described by the Greeks; some bearing the implements of solemn sacrifice, and others leading the victims peculiarly sacred to the SUN, the majestic steed, and the stately bull;—of that pomp, I say, these magnificent objects are by some writers considered as a decisive representation: while others, observing similar processions pourtrayed on the walls of the temples of the Thebais, pronounce them to be of a sacred and mysterious nature, and conclude, that what is called the *palace* should, in fact, be called the *temple* of Persepolis. That decision, however, betrays gross ignorance of the manners and religion of the Persians, who, according to Herodotus* and Hyde†, the two greatest authorities that can be produced on the subject, erected no temples whatever to the deity. The former writer says, "they had neither statues, temples, nor altars, but that they sacrificed to Jupiter upon the highest mountains:" the latter informs us, that, "before the PYRÆIA, or *ignis domicilia*, were erected, they performed all their sacred rites *sub dio*, in the open air, and that they had *no name in all their language for a temple*."—He adds, that the pyræia were constructed by the order of Zerdusht himself, at a comparatively late period, in order to preserve the sacred fire from extinction by wind or

* See Herodot. Clio, sect. 31.

† Hyde's Hist. Relig. Vet. Pers. cap. 29, p. 359.

rain*. Chelminar was, therefore, without doubt, a palace; but which, as civil and religious rites were so intimately blended in Persia, was adorned with evident symbols of the predominant *Sabian* superstition, not yet reformed, because Zerdusht, its grand reformer, had not yet *appeared* on earth. Whether, however, it was the identical *palace*, so richly lined and adorned with cedar, to which Alexander, in the fury of his intoxication, set fire, is a point which cannot be so easily ascertained. I must here observe, that Sir Thomas Herbert expresses great doubts concerning this profusion of cedar, as mentioned by Curtius, the country thereabout not producing that species of wood; but they have cypress trees in great abundance, and, from the cypresses sculptured in marble, so frequently occurring on the remaining walls and pilasters at Chelminar, and so conspicuously prominent among the figures in procession, it is more probable that the latter wood, which is also highly fragrant and costly, was, in fact, made use of in the building, thus consumed. It will be observed, however, that not the smallest traces of fire, nor the least mark of calcination, had ever been observed on the walls of these ruins.

As some of my readers may not be possessed of the expensive volumes of Chardin and Le Brun, nor have perused any authentic accounts of these ruins, I shall take the liberty of presenting them with a part of the description which Mr. Francklin, one of the most judicious of modern travellers, has given of them. The period of his visit to them was in 1786, and at that time, out of the nineteen columns seen by Herbert, only fifteen remained entire; this is attributed by our author to the frequent shocks of earthquakes and the terrible storms of thunder and lightning to which that country is

* Ibid, p. 360.

subject, owing to which, it is not improbable that, in the course of a few centuries more, the remains of this vast edifice may be crumbled into their original atoms.

"At nine A.M. [Sept. 2, 1786], we went to visit the ruins. What remains of the celebrated palace of Persepolis is situated on a rising ground, and commands a view of the extensive plain of Merdasht. The mountain Rehumut encircles the palace in the form of an amphitheatre: you ascend to the columns by a grand staircase of blue marble, containing one hundred and four steps." [Herbert and Mandesloe mention only 95.] "The first object that strikes the beholder on his entrance, are two portals of stone; I judge them to be about fifty feet in height each; the sides are embellished with two sphinxes of an immense size, dressed out with a profusion of bead work, and, contrary to the usual method, they are represented standing. On the sides above are *inscriptions in an antient character*, the meaning of which no one hitherto has been able to decypher.

"At a small distance from these portals you ascend another flight of steps, which lead to the grand hall of columns. The sides of this staircase are ornamented with a variety of figures in basso relievo; most of them have vessels in their hands; here and there a camel appears, and at other times a kind of triumphal car, made after the Roman fashion; besides these, are several led horses, oxen, and *rams*, that at times intervene and diversify the procession. At the head of the stair-case is another basso-relievo, representing a lion seizing a bull; and, close to this, are other inscriptions in antient characters. On getting to the top of this stair-case, you enter what was formerly a most magnificent hall; the natives have given this the name of Chehul Minàr, or forty pillars; and, though this name is often used to express the whole of the building, it is more particularly appropriated to this part of it. Although a vast number of ages have elapsed since the

foundation, fifteen of the columns yet remain entire; they are from seventy to eighty feet in height, and are masterly pieces of masonry: their pedestals are curiously worked, and appear little injured by the hand of time. The shafts are enfluted up to the top, and the capitals are adorned with a profusion of fret-work.

"From this hall you proceed along, eastward, until you arrive at the remains of a large square building, to which you enter through a door of granite. Most of the doors and windows of this apartment are still standing; they are of black marble, and polished like a mirror: on the sides of the doors, at the entrance, are bas-reliefs of two figures at full length; they represent a man in the attitude of stabbing a goat: with one hand he seizes hold of the animal by the horn, and thrusts a dagger into his belly with the other; one of the goat's feet rests upon the breast of the man, and the other upon his right arm. This device is common throughout the palace. Over another door of the same apartment is a representation of two men at full length; behind them stands a domestic, holding a spread umbrella: they are supported by large round staffs, appear to be in years, have long beards, and a profusion of hair upon their heads.

"At the south-west entrance of this apartment are two large pillars of stone, upon which are carved four figures; they are dressed in long garments, and hold in their hands spears ten feet in length. At this entrance, also, the remains of a stair-case of blue marble are still visible. Vast numbers of broken pieces of pillars, shafts, and capitals, are scattered over a considerable extent of ground, some of them of such enormous size, that it is wonderful to think how they could have been brought whole, and set up together. Indeed, all the remains of these noble ruins indicate their former grandeur and magnificence, truly worthy of being the residence of a great and powerful monarch; and, whilst viewing them, the mind becomes impressed with an awful so-

lemnity! When we consider the celebrity of this vast empire, once the patron of the arts and sciences, and the seat of a wise and flourishing government; when we reflect on the various changes and revolutions it has undergone, at one period a field for the daring ambition of an Alexander, at another for the enthusiastic valour of an Omar; we must consequently feel the strongest conviction of the mutability of all human events! Exclusive of these more antient inscriptions already mentioned, are others of a modern date, able to be read, as well as some in the Syriac character; the whole of which the celebrated Mr. Niebuhr has accurately copied and published. Being destitute myself of all materials necessary for copying inscriptions, and at the same time ignorant of the rules of architecture, I have refrained from entering into a diffusive account of this celebrated palace. What I thought most worthy of notice, I have endeavoured to describe to the best of my abilities*."

To this authentic, unadorned description of the Persepolitan ruins Mr. Francklin has added, in a future page, the passage from an antient Persian manuscript called Rouzut al Sefa, containing the native account alluded to above of its erection.

"'It is related by historians that King Gemsheed removed the seat of government, which was formerly in the province of Sejestaun, to Fars; and that in the neighbourhood of Shirauz, having taken in a spot of ground of twelve furfengs in length (48 English miles), he there erected such a palace, that in the seven kingdoms of the world there was nothing that could equal it. The remains of that palace, and many of the pillars on it, are visible to this day; and he caused the palace to be called *Chehul Minar*, or *Forty Pillars*. Moreover,

---

* Francklin's Travels, p. 208, edit. 1790.

when the Sun, quitting the sign Pisces, in the heavens, had entered Aries, Gemsheed, having assembled all the princes, nobles, and great men of his empire, at the foot of his imperial throne, did on that day institute a grand and solemn festival; and this day from henceforth was called the Nauruz, or First Day of the New Year, when the foundation of Persepolis was laid.'

"It is further observed, in the Jehan Arà, a book of Persian chronology, that Queen Homaie, who flourished about 800 years after Gemsheed, added a thousand columns more to this palace. Such are the Persian accounts, which are believed by the present natives to be true ones; but I should presume, that, until the antient characters on the walls can be decyphered, no account of this place, either Grecian or Persian, or any other, can be depended upon as genuine or authentic, as they are unquestionably of an antiquity far beyond the records of any language now known in the world*."

From the above extracts the fact of the figures delineated on the walls having been intended as a representation of the procession in honour of the birth-day of *one*, at least, of the antient emperors of Persia, is established beyond all doubt, and that, also, of the astronomical allusion of the sacred sculptured animals, which have nearly all relation to the zodiacal asterisms, as the *lion*, the *bull*, the *ram* (Aries,) and the *goat* (Capricorn,) repeatedly pierced by the sacrificing knife is as plainly demonstrated. The "triumphal car" is doubtless the chariot of the sun; the led horses are the horses of the sun, of the celebrated NISÆAN breed; and the whole procession greatly resembles that described in a former page of the Persian monarch, marching to battle in all the pomp of Asiatic magnificence. But the sovereign

* Ibid, p. 226.

intended by the sculptures of Persepolis was of no modern dynasty; those sculptures probably allude to a period to which regular history does not ascend; a period beyond even the grasp of tradition itself. The figure sitting in a chair, with his feet resting on a stool, with a long staff, or sceptre in his hand, and behind whom stands an attendant holding over him an umbrella, the mark of royal dignity in Persia, is probably meant for that sovereign himself, receiving the respectful homage of his subjects, arranged below him in long array, dressed in the vestments of their respective countries, and loaded with their various produce. The figure elevated above with the bird's wings issuing from his middle, and on which he rests buoyant in the air, is that of MITHRA, the Persian god, whose worship may be supposed to have flourished in its meridian glory, when this edifice was erected. It is a figure sometimes occurring on the more antient Darics, which are distinguished on the reverse either by this symbol, or an archer, with his bow bent, in act to shoot. On the other side is the Persian monarch *crowned*. They were first coined by Darius Hystaspes, and called Darics, after him, who began to reign 518 years before Christ.

The more antient inscriptions on those walls, in characters of a pyramidal form, unintelligible at this day even to the Persees themselves, and those best skilled in the antient languages of Persia, seem irrefragably to prove the high antiquity here contended for in their favour. That the Persees should not be able to decypher their meaning is strange, indeed; if it is in Persia, as Sir W. Jones, the most eminent of those Persian linguists, informs us, in the preliminary dissertation to the Asiatic Researches, that, "we are alone to seek for *genuine Persian*, as for French in France, and for Italian in Italy." In another place he acquaints us, that, as Zerdusht was only a reformer, in India may be discovered the true source of the antient Persian religion, which ought to imply some similarity in language, at least in matters con-

nected with religion, by a race so entirely devoted to religious exercises as were both Persians and Indians: and undoubtedly that similarity exists, though whosoever will cast his eye over the plate of *antient Persian letters*, copied from the ZEND for the express purpose of exhibiting that character, by a native of Yezd, a Persee, then in Bengal*, will not be struck with the resemblance; the Persepolitan being a very *simple* character, consisting, like those found at Babylon, of a straight line and an angular figure, occasionally varied in their position; while the Zend is particularly involved and complex in its formation.

With respect to the remarkable similitude subsisting between those more antient and undecyphered characters under consideration, the reader, by casting his eye attentively over the plate in this volume, on which the inscriptions at Persepolis and those stamped on the Babylonian bricks are respectively engraved, will perceive their general resemblance in the most striking point of view; a resemblance, that demonstrates their having been executed by a race possessing the same symbolic character, and animated by the same spirit of superstition. We have seen that Mandesloe, one of the most intelligent of the early travellers who visited these ruins, or about A.D. 1638, describes the characters at Persepolis as "*triangular*, *pyramidal*, or like *obelisks*;" and, in fact, amidst them we observe in either divison the pyramid and the triangle constantly recurring; the former the known emblem of the solar ray, the latter of the igneous element. In general, the symbolic designations in both inscriptions, however varied, may be described as compounded of the *two* elementary characters here engraved, which, in reality, are the basis of all of them, as the reader, by a minute examination of both, will clearly perceive.

* See Asiatic Researches, vol. i. p. 45, plate 7.



Elementary Characters of Persepolis.

To imagine with some writers that these characters, so abundant and so elaborate, were placed as mere ornaments on the doors, or round the windows at Persepolis, where they are found in the greatest profusion; or, with others, that they were the offspring of the capricious whim of the architect, though the former opinion is sanctioned by the learned Hyde—these are suppositions in my opinion without the least foundation*. The conjecture that they were intended as a kind of *charm*, or *talisman*, to avert the power of evil dæmons from injuring the edifice, is far more reasonable, as being in unison with the prevailing superstition of those early ages, and the doctrine of good and evil genii contending for the empire of the universe. Such a talisman, we have remarked, is mentioned in the Jerusalem talmud, as intended to have been placed on the summit of the Tower of Babel,

* Me autem judice, (says Hyde,) hi characteres non sunt *literæ* nec pro *literis* intendebantur. Again: hi characteres, seu figurationes, non possunt esse voces, nec literæ legendæ, nec tali usui serviunt, sed tantum ornatus et lusus gratiâ adhibentur.——Hyde de Relig. Vet. Pers. p. 527, 528.

to secure even that profane structure from demoniacal fury*. Whether they were used as talismans or not, they were, doubtless, the sacred and solemn characters under which the mysteries of the antient Persian and Babylonian religion—an astronomical religion, it will be recollected—were concealed; forbidden to vulgar investigation, and known only to the priesthood and the initiated.

In the Archæologia, vol. xiv. p. 55, there is an account, by Dr. Hulme, of a sun-baked brick in his possession, which has the figure of a LION impressed upon it, with an inscription in a different and doubtless much later character, of which Mr. Henley, in the same volume, at p. 206, has, by his profound knowledge of oriental tongues, discovered the meaning to be, A BRICK BAKED IN THE SUN. He conceives the animal impressed upon it to be a large dog, and takes it to be intended for SIRIUS, the *dog-star*; but from the former symbol so often occurring amid these ruins, and the wide dissimilitude in many points between the theological systems of Chaldæa, and the nation so particularly devoted to the worship of the dog-star, it is most probable the figure, much abraded, and therefore *doubtful*, was intended for the LION, the Babylonian symbol of strength and glory, and their partiality to which was evinced by the great standard of the empire having for its insignia *the sun rising on the back of a recumbent lion,* of which the reader may see an engraving from Hyde in the sixth volume of Indian Antiquities.

* See a quotation from that Targum, in a preceding page of this work.

Observations on the important Persepolitan Monument recently imported into Europe, and engraved by M. Millin; exhibiting the symbols of the ancient Zodiac of Chaldæa.

Of the more antient and genuine Persepolitan characters — a character which is so well described by Sir W. Jones, as resembling "the head of a javelin, or (to use the words of a botanist) a leaf *hearted and lanced**," both simple and in combination as above described, by far the largest and most important collection has been presented to the literary world, from a marble monument lately transported to Europe, in the publication of M. Millin, superintendant of the national Museum at Paris, surmounted on both sides with many curious figures of animals, on which he has made some judicious observations, though, in supposing them to allude to the descriptions of animals and persons in any composition of the age of Hystaspes, I cannot but consider him as palpably wrong. That he should not have instantly perceived that the symbols engraved upon it are ZODIACAL, and have a reference to the oldest sphere which human GENIUS formed, that proud gift to man of HIM who made the heavens! and whose fires were first lighted on the shores of the Euphrates, appears to me astonishing in so profound a mythologist. M. Millin's publication, however, is a work of deep antiquarian research, and from its pages a strong light has been reflected on many of the most precious monuments

* Dissertation on the Persians, in Asiat. Research. vol. ii. p. 57, edit. quarto, London.

of *classical* antiquity that once adorned the palaces of Asia and the temples of Greece. This most valuable Persepolitan monument was brought from Persia, by Count Michaux, the celebrated botanist, who accidentally found it in the ruins of a palace below Bagdad, near the Tigris, called the gardens of Semiramis. It has the appearance of having been rolled in the waters of that river, before being worked. Its form he describes as round, long, and rather flattened; one foot and a half high, and one foot wide. "Its *pyramidal* form, sacred to the religion of the Persians, seems the most appropriate for the delineation of figures that have an evident relation to their religious worship. It is worked on its two faces, each of which is divided into two sections. In the superior space are the emblematical figures; the inferior contains the inscriptions*."

M. Millin frankly confesses that what he offers, by way of explanation respecting the sculptured figures, is merely conjectural. "I do not pretend," he says, "to develope the relation which they bear among themselves, nor to render comprehensible an ænigma so obscure as the sense of the inscription, which, if decyphered, would doubtless give the full explanation of them. It is a subject for the profound meditation of those who make the Persepolitan monuments their study. I confine myself to the idea that, in all probability, it was a *talisman;* a preservative against the malignant operations of an evil genius." There can be no doubt of this monumental remain having an immediate reference to the system of the Persian superstition; which, it must be repeated, was of an astronomical nature, and most of the objects designated upon it are decidedly connected with

* Monumens Antiques, &c. par A. L. Millin, tom. i. p. 60, Paris, 1806.

those of the *sphere*; the *most antient sphere*, delivered down to us by Ptolemy from an Asiatic source, and which contained only 48 constellations. I do not assert this from any anxiety to support a favourite *hypothesis*; for it is the result of a long and minute attention to the objects engraved upon it, *grotesque* and *fanciful* as they are; and there is scarcely one figure, simple or compound, among them, that has not some relation to the sidereal host, while many of them are *actual asterisms*. To what object, indeed, except the HEAVENS, should a monument have reference, which has engraved on one of its faces the SOLAR ORB, in a disk darting forth intense flames, and surrounded by stars, for, though two stars only appear on this mutilated fragment, in its entire state there were probably others; or the two exhibited may represent the *morning* and the *evening* stars. But let us proceed to the examination of the curious particulars, by which, if I am not mistaken, will be proved that we have obtained, at length, that grand desideratum in astronomy, a large portion of the symbolic asterisms that adorned the ANCIENT BABYLONIAN SPHERE.

The monument, divided into two sections, is engraved on two large plates, marked in M. Millin's publication, vol. i. page 58 and 63, as numbers 8 and 9. In the first plate, or No. 8, a vast serpent, which our author, from its form and magnitude, thinks of the Boa-species, with its enormous winding folds, incloses the superior ridge and a considerable portion of that division of the marble. On inspecting the celestial globe the reader will observe, that a very conspicuous constellation, which we denominate SERPENTARIUS, usurps also a vast portion of the northern hemisphere, and was particularly known to the Persians by the name of Ophiucus, *Serpens Ophiuci*, generally considered as one constellation. It was the Ahriman, or evil genius, of that mythology, whose precise date baffles all our conjectures.

The sculptured figure that next occurs under the extended serpent is the SCORPION, a well-known zodiacal asterism; and, if the reader will please to consult any good celestial globe, he will there perceive that the Scorpion is placed on the sphere exactly under that of Serpentarius, and that the right foot of Ophiucus even rests upon the body of that asterism.

There next occurs on the plate a singular kind of bird, which, from its form and crooked bill, appears to be a bird of prey, and M. Millin thinks it to be a species of HAWK; *(Accipitres, L.)* a bird equally venerated by both Persians and Egyptians, as an emblem of the sun, and of light*. It is impossible for us precisely to know what animals of the bestial or winged kind, or what compounded of beast, bird, and fish, were inserted by the Babylonian astronomers on their most ancient sphere; they were probably in many respects different from those that have descended down to us from the Greeks, and a few of them have already been pointed out on the authority of Mr. Costard on the Chaldæan astronomy; but in the northern hemisphere the eagle, which was both an *emblem of the sun* and *a bird of prey*, holds a conspicuous station. In some ancient schemes of the heavens it is called the Vulture; according to the later system invented by Greek fabulists, the vulture that preyed upon the liver of Prometheus—but, according to Hyde and Ulug Beg, simply denominated VULTUR VOLANS; *eo quod, quasi in volatu, alas pandit*†. In other ancient Persian fables, Hyde tells us, it is called AQUILA NIGRA, the *black eagle;* and of this eagle, not very remote from the serpent, the predatory bird in question may have been the prototype. The succeeding

* See Horus Apollo, p. 63, edit. Romæ, 1631.

† See Hyde's profound Comment on Ulug Beg's Fixed Stars, p. 25, edit. Oxon, 1765.

bird, M. Millin, from its configuration, thinks to be of the gallinaceous kind, and determines to be the DODO, or DOGDU, as it was called by the Persians. This name, he says, is also given to the mother of Zoroaster, because the Dodo lays very many eggs, and is an emblem of fecundity. Whatever truth there may be in this statement, it is indisputable, as has been intimated before, that the old Chaldæan sphere contained an asterism called the *hen and chickens*, by which was meant the shining cluster in the neck of the bull, denominated the Pleiades, and this asterism existed on the sphere a thousand years before either Zoroaster, or the Dodo, his pretended mother, was born!*

The two next figures exhibit a strange compound of the parts of animals of widely different species; the first having the body of a *serpent*, the beak of a *bird of prey*, the crest of a *fish*, and a *main;* the second having, also, the body of a *serpent*, with a *lion's head*, surmounted by two horns; a third animal follows, evidently of the *wolf* kind: M. Millin thinks it the *jackall*, so common in Persia. At these singular combinations our wonder will be considerably dimi-

* It will be here, perhaps, observed that there existed in antiquity *two* Zoroasters; the one the *founder*, the other the *reformer*, of the Magian religion. The first is supposed to have been a Babylonian, and to have taught the Chaldæans astronomy; the second flourished in the reign of Darius Hystaspes; but all that is asserted respecting the former Zoroaster, and all the writings imputed to him, are generally allowed by the learned to be a gross fabrication. Of the latter who is known to have been cotemporary with Hystaspes, and of his writings, something more certain may be said. To him is ascribed the ZEND, or ZENDAVESTA, the book containing his pretended revelations, and which is reverenced, like our Bible, among the Guebres, or Gaurs. Hyde informs us that it is written in the pure old Persian language, and in the character called PAHLAVI. The SADDER was composed about 300 years ago, when the old Persian language had become antiquated, by one of the Destours, or high priests; and is only a compendium, in the vulgar or modern Persic tongue, of those parts of the ZEND that relate to their religious duties.

nished on reflecting, that in the temple of Belus, as described by Berosus in Syncellus*, the hand of the painter had decorated the walls and the ceiling with emblematical designs, allusive to the birth of nature and the first principles of things: some of the figures combining in one androgynous body the two sexes, and others being compounded of the parts of men and beasts. That the body and extremities of a *fish* were also, sometimes, added to the heterogeneous mass, cannot be wondered at in a race who owned the fish-god, Oannes, for their first instructor in arts and sciences, and whose form would naturally enter into their system of hieroglyphic delineation. Their exact conceptions in forming these mysterious images cannot now be fathomed, as the inscriptions that explained them cannot be interpreted. Most probably, however, they were so sculptured to represent the different qualities of the objects and animals, of whose parts they were composed, as the strength of a *lion*, the cunning of the *serpent*, the ferocity of a *bird of prey*, &c. &c. as vested in the figure thus delineated. This ancient system of blending in one mysterious emblem the parts of various animals, with due deference be it remarked, has been, in part, adopted in the sacred scriptures themselves; for it will be recollected, that in the consecrated cherubic symbol of the Hebrews, the LION, the BULL, and the EAGLE, bear a prominent part.

On the subject, also, of *horns*, being thus particularly mentioned, I must be pardoned for repeating, that in eastern mythology they are the usual symbolic representations of light and glory: they decorate, with that view, the heads of most of the ancient heroes of the Pagan world, and are sometimes used, in that sense, even in the sacred

* Berosus apud Syncelli Chronog. p. 28.

writings. We read in Exodus of the *horns of the altar, and overlaid with pure gold*, that they might more widely diffuse the irradiations of their glory. Jupiter Ammon was *horned*, and Alexander usurped the symbol of his vaunted father. Moses was *horned*, and Bacchus was *horned*, i. e. rays of light, like horns, encompassed their heads. The serpent, too, as a symbol, often occurs both in the Old and New Testament: of these the most conspicuous and memorable was the *brazen serpent* elevated in the wilderness. In its pointed allusion to this celebrated reptile, that has played so conspicuous a part in the theology of all nations, the Assyrian mythology very much coincides with that of India, many of the Indian deities having their bodies invested with *serpents*, in eastern mythology the symbol of *life*, and sometimes of *immortality*, having their extremities terminating like a fish, in which form also Vishnu, himself, became incarnate in his third avatar. By the first of the figures above-mentioned, one of the aquatic animals of the sphere was possibly intended; while in the *lion* and the *wolf*, however adorned with hieroglyphic decorations, we recognise two of the 48 constellations of the ancient sphere.

The surface of the reverse of this monument is, also, inscribed with two columns of characters, evidently written, as is demonstrated by an inspection of the plate, from the left hand to the right, and, as M. Millin has well observed, with many new combinations of the pyramidal character, which circumstance seems to prove the inscription to be of rather a later date than the more simple characters on the walls of Persepolis. It is surmounted by various symbolic designs, which still farther prove it to be in connection with the solar superstition, in particular with three stars inclosed in a disk, of which the central one, by its magnitude and effulgence, indisputably meant for the disk of the SUN, darts forth flames, similar, says M. Millin, to those that accompany the thunder represented by the Greeks. Below them, on

the left, appear two *altars*, each of which, on the front, is adorned with three reversed pyramids, the constantly recurring emblem on these monuments. Next follows an animal, which he denominates a "fissipede," adorned with prominent horns, in a kneeling posture, and whose head approaches in form to that of the *goat*. Without meaning impertinently to press the opinion, intimated above, that this fragment alludes to the sphere, I shall only beg leave to notice, that ARA, the altar, is designated among the 48 antient constellations, and that the *goat* apparently alludes to CAPRICORN, a zodiacal asterism. This monster is also winged and covered with scales. Beneath is a river, the waters of which seem to flow from two sources, and to unite their streams, in order to lave the base of the representation. Near the inundation is a large *arrow*, the point downwards, perhaps placed there, says our author, to indicate the course of the river, as we now place arrows in our hydrographical charts. I presume to think differently, and consider it as the SAGITTA, or arrow, of the sphere, one also of the 48 old northern constellations, nor needed the course of the river to be so pointed out. That river I conjecture to be only an *effusion of water*, designative of AQUARIUS, and the Sagitta possibly may be the arrow in the hand of SAGITTARIUS; the more conspicuous symbol being on some antient spheres placed for the entire asterism.

By consulting any good scheme of the heavens, the reader will observe, that the objects and animals, above-mentioned, approximate very near to each other, in particular that Scorpio, Sagittarius, Capricorn, and Aquarius, successively occurring on this monument, follow each other in the zodiac. The point of the arrow in Sagittarius inclines downwards. Near the effusion is another *altar*, adorned with two reversed pyramids; it bears, also, a pyramid placed horizontally, the point directed towards the river. The form of some of these engraved

pyramids so greatly resembles the *triangle* of the sphere, another of the 48 old constellations, that although to the sons of Mizraim, such renowned geometricians, the invention of that asterism is generally referred, yet I cannot but consider it as having been exalted to the sphere by their elder brethren, both in the order of nature and in geometrical knowledge, the Chaldæan philosophers, who venerated it at once as one of the most perfect figures in science, and in theology as the most expressive symbol of their great god, the SUN.

An animal, more singular and complex in its formation than any preceding one, next occurs. The body is covered with scales; it has the paws of a *lion*, and the snout of a *wild boar*, and has horns upon its head, not curved like those of the former animals, but straight. This association of the lion and wild-boar, M. Millin acquaints us, he had never observed on any monument whatever before. Next is seen an altar similar to the preceding one, except only that the pyramidal figure upon it is placed perpendicularly; and after this altar finally succeeds an animal nearly resembling that just described, compounded of the parts of a fish, of a lion, and a boar. The reason of this perpetual recurrence to the scaly tribe has been explained, as having reference to the scaly investments that distinguished the fish-god, or Dagon of the Chaldæans, when, emerging from the abyss of the ocean, he by *day* instilled into them the knowledge of the social and moral duties, with the arts necessary to life; and when the sun declined, again retired and lay concealed in the bosom of the watery element. The remembrance of this wonderful amphibious being, the *Deus Cetus* of all Pagan antiquity, and supposed to have an immediate relation to the history of the great patriarch, who was so long an inhabitant of the deep, and taught laws and science to the renovated world, was ever present to their minds, and is conspicuous in every part of their mythology. The frequent repetition, also, of the hiero-

glyphic lion, according to Mr. Francklin*, the symbol of empire among the antient Persians, for the reasons above adduced, must not be wondered at. With respect to the symbolic *boar*, an old exploded asterism, but still preserved in the Indian, which was probably, in many respects, similar to the Chaldæan sphere, under the name of Sisumara, or sea-hog†, that animal acted too conspicuous a part in the Syrian mythology, having caused the death of Adonis, the SUN, to whose worship this monument has an undoubted allusion, demonstrated by the stars, the altars, and the oblations, sculptured upon it, to be neglected in the arrangement of its constellated objects. Here, also, we observe another instance of the striking similitude existing between the Assyrian and Indian systems of mythology; for the VARA, or boar, and the SING, or lion avatar, are among the most celebrated of the nine incarnations of Veeshnu, now generally considered as alluding to the progress of the sun in the heavens. No religious rites are more celebrated in all antiquity than those that have reference to the beautiful deified sovereign of Syria. The tears and wailings of the women, and the bitter lamentations of the priests, for the slain Adonis, or, as he is called in scripture, THAMMUZ, are recorded both by profane and sacred writers; as well as their unbounded joy, when, towards the conclusion of the festival, the dear deceased object of their affection was restored to life, which was called the Ευρεσις, or *discovery*, as his death was his Αφανισμος, or *disappearance*. These expressive Greek terms explain to us at once the mystery of the whole transaction. The boar, an obsolete constellation near the pole, was the

---

* See his Travels, before cited, p. 139.

† Sir W. Jones on the Indian Zodiac, Asiatic Researches, vol. ii. p. 402.

emblem of *winter*, which diminishes the light and heat of the sun during six months of the year; his *vigour* was thus destroyed, and hence the boar is said to have wounded him in the groin. Having at length travelled through the six signs of the lower hemisphere, metaphorically called the region of Pluto, he at the end of six months returned with renovated vigour and splendour towards those of the north, enlivening all nature with the genial warmth of his beams, and diffusing mirth and hilarity through every bosom.

The learned Mr. Costard, on the Chaldæan astronomy, has favoured us with a somewhat different explanation of the fable of Adonis having been killed by an enraged boar. He informs us that the Syrian month Haziran, in which that event happened, is derived from the Chaldaic root Hazir, or Hazira, signifying *sus*, *porcus*, a HOG, and the sun finishing his course, or apparent annual circle, when Sirius rose heliacally, which, in very antient periods, took place in the same month; that circumstance gave birth to the ingenious allegory of the young and beautiful Adonis being *killed by a boar**. In another place he hints, that on the most antient Egyptian sphere there might be drawn the sign of a boar; but whether that were the case or not, it appears to have been designated on the lunar zodiac of India, where the BOAR'S HEAD (the head for the animal, like that of Aries for the ram) fills the 18th division on the table of the Nac Shattra, or mansions of the moon. The entire animal is, also, to be seen pourtrayed on the Chinese solar zodiac, engraved in the authentic volume of Kæmpfer†. The course of my studies having led me very much into the investigation

* See Costard's Rise of Astronomy, p. 49.
† See Kæmpfer's Japan, p. 145.

of the eastern zodiacs, I have ventured to throw out these few hints as mere conjectures on the venerable but imperfect fragment of antiquity under consideration, which appears to me not only to allude to the SUN's annual progress through the Zodiac, combating, as the poets feign, with the monsters of the sphere, but to be a part of that Zodiac itself.

This mode of explaining the celebrated Persepolitan monument under consideration, every object sculptured upon it and every object at Persepolis has a direct tendency to justify. With respect to the monument, the sun and stars with their disks, and the pyramidal figures frequently formed into *stars* and triangles themselves, will not permit us to doubt of it. In regard to Persepolis, though we must not directly call it a *temple*, for it was a palace—but it was a palace erected under the influence of the splendid solar devotion, and dedicated to the SUN, like the superb palace of that orb, so beautifully described by Ovid—dedicated to the SUN, by the SON OF THE SUN, whether it were Cai Khosro, or Jemshid. For what are the thousand columns of Chelminar but so many expressive symbols of the solar ray, constantly represented in Egyyt and in Chaldæa by the conical form of the Obelisk, where Pliny has informed us that OBELISKS were sacred to the sun, in the following forcible passage, " Obeliscos, SOLIS NUMINI sacratos. Radiorum ejus argumentum in effigie est, et ita significatur nomine Ægyptio*." And how is the palace of the sun described by Ovid —

Regia solis erat sublimibus alta columnis;
Clara micante auro, flammasque imitante Pyropo!

* Pliny Nat. Hist. lib. 36, cap. 16.

Although almost grown too old for poetry; yet, in allusion to what Herbert has told us of the rich gilding that once glittered on the columns of Persepolis, I will venture thus to paraphrase these lines of the Roman bard :—

High on a thousand jasper columns rais'd,
Persepolis, thy radiant palace blaz'd;
Those columns, symbols of the solar light,
With gold and burning gems intensely bright!
On nations, sunk in death's oblivious stream,
Pour'd the rich flood of heav'n's ætherial beam.

The Persepolitan astronomical monument which we have been considering was, we have seen, of a pyramidal form, the most proper, therefore, as before intimated, to record what related to the worship of the sun. It probably resembled the HAMMANIM, or sacred images of scripture, Isaiah xvii. 8, which Spencer thinks were stones of a conical or pyramidal form, dedicated to the sun, and deposited in the temples of Jupiter Ammon*. Upon this the Ammonæan characters were anciently written or engraved, and these probably are of that description, some of which, resembling those of Persepolis, are said to have been recently discovered in Egypt.

It has excited in my mind no inconsiderable degree of surprise that so profound an oriental scholar as Dr. Hager has proved himself to be by his work on the Chinese characters, and his publication on the Babylonian Inscriptions, should have degraded the characters inscribed upon our bricks, by representing them as mere

* See Spencer de Legibus Hebræorum, lib. ii. cap. 15.

records of the names and places of abode of the fabricators of them, in the same manner, he intimates, as the antient Roman bricks are inscribed with the names of the manufacturers and place of their manufacture in Rome. Surely the elaborate and lengthened details in the same character, though with occasional variations, engraved on the marble recently commented upon, utterly refute any hypothesis so humiliating to the genius and scientific attainments of the Babylonian literati*. Would an inscription of that nature, for the characters are the same with only some new combinations, have been permitted to deface the walls and the windows of the Palace of the Khosroes? the supposition is incredible, and the fact must be as I have previously presumed, upon a most extensive consideration of the subject, to state it in these pages.

The name of *arrow-headed,* bestowed upon these characters by himself and other authors, is very proper in more respects than one, as the arrow was a sacred symbol among the Persians; *sagitta solis,* the arrow of the sun, the great archer. Imbuit *sagittas phœbi* primus Draco.—Seneca. He means the celestial Draco, pierced by the solar arrows. The expressive emblem was stamped on their principal coin, *the Darics:* hence the well-known witticism of Agesilaus, recorded in Plutarch, that he had been defeated by Artaxerxes, and driven out of Asia *with thirty thousand archers,* meaning the coin stamped with the figure of an *archer,* by which that prince had bribed over to his interest the principal persons in the states of Greece.

---

* See Hager on the Babylonian Inscriptions, p. 57, a work which I have only lately become possessed of, by the liberality of the editor, and a more particular notice of which, as well as his work on the Chinese Characters, will be taken in a proposed Appendix to this publication.

DIVINATION BY ARROWS.

Nor was the veneration for this antient symbol less powerfully impressed upon the minds of the Babylonians, than of the Persians, since, as we have already observed, it was exalted to the sphere by that astronomical race of priests, and formed a conspicuous asterism among the old 48 constellations. It was also employed in the most solemn rites of their religion: they had, in fact, a sort of *divination by arrows*, of which a curious instance is recorded in the page of holy writ. When Nebuchadnezzar was on his march to besiege Jerusalem, he stopped to use this species of divination. It is more clearly expressed in the Latin vulgate than in the translation; therefore I quote the former. *Stetit Rex in bivio, capite scilicet duarum viarum, divinationem quærens;* COMMISCUIT SAGITTAS, et interrogavit Teraphim, — Ezekiel, chap. xxi. ver. 21. When any enterprize of great moment, says Pococke, was to be undertaken by the Chaldæans, they consulted the sacred arrows, by writing upon them the names of the respective cities, or kings, they intended to assault: they mixed these arrows promiscuously in a quiver, or some vessel set before an idol, their teraphim, and then drew them out, as lots are drawn: the name inscribed indicated the place or person whom the deity appointed to be first assailed: in the present case, the lot fell upon Jerusalem*.

In this relation we have evident proof that the antient Chaldæan superstitions remained in their full vigour at the time this great prince marched to besiege Jerusalem, about the year before Christ

* Pococke's Specim. Hist. Arab. p. 327.

600; for the TERAPHIM, here said to have been consulted, were the old metallic planetary idols described in the early part of this volume. From the same sacred authority, also, we are able to ascertain another most important point in this discussion, respecting Persia. It has already been observed that Zoroaster, the supposed founder of the Magian religion, flourished under Darius Hystaspes, whose reign commenced 518 years before Christ; but the whole system of the Magian superstition, we know from Isaiah, was established, and its rites in extensive and vigorous cultivation, above two centuries before that period. That prophet flourished in the eighth century before Christ; and in his eloquent book we find Jehovah, in direct allusion to their celebrated doctrine of the *two principles*, using the remarkable expressions cited in a former page; I *form the* LIGHT, and I *create the* DARKNESS*. Isaiah xiv. 6.

After wandering through the immense field of Asiatic superstitions displayed in the preceding pages, and, in particular, having dwelt so long on the splendid Sabian idolatry, and the mysterious characters by which it was equally designated at Persepolis and Babylon, it is high time, if possible, to solve the enigma, and close the protracted discussion. To do this satisfactorily we must once more turn our eyes to that terra sculptilium, that land of sculptured imagery, I will not absolutely say idolatry—to INDIA!

That the antient race of Hindoos were as deeply immersed as their neighbours of Assyria and Persia in the abyss of the Sabian superstition has, I trust, been too decisively proved in my prior and more popular work, the "Indian Antiquities," to need any fresh arguments

---

* According to Blair, Isaiah began to prophesy in the year before Christ 757, and continued to do so until his death in 696.

in these pages for the demonstration of the fact. To this day many evident remains of that superstition and its nefarious rites, especially that dreadful one of human sacrifice which ever attended it, exist in that country. To Sir W. Jones, on this as on most other occasions of difficulty, must we be indebted for a solution of the mystery. His profound researches into the history of Asia led to a most important discovery, which has in a great degree dissipated the darkness that shaded the antient annals of Iran, or Persia, taken in its most extended limits, and, as his own pen has well observed, has cast a gleam of light on the primæval history of the human race itself. From a rare and interesting Persian tract on twelve different religions, entitled the DABISTAN, composed by a learned Mahommedan, named *Mohsan*, a native of Cashmere, he collected that, long anterior to the time of Zerdusht, the religion of HUSHANG, a religion expressly founded on Sabian principles, extensively prevailed. The Dabistan contained a particular description *of the several Persian temples, dedicated to the sun and planets, of the images adored in them, and of the magnificent processions to them on prescribed festivals;* one of which, Sir William thinks, is probably represented by sculpture in the ruined city of Jemshid. From that book he also learned, that a powerful monarchy, consisting of Hindu sovereigns, had been established for ages in Iran before the accession of CAYUMERS; that it was called the Mahabadian dynasty; and that many princes, of whom seven or eight only are named in the Dabistan, and among them MAHBUL, or MAHA BELI, had raised their empire to the zenith of human glory. That this great and mighty Belus was the very same Belus, recorded as the fifth avatar, in the antient Indian Annals, annals doubtless including, also, a great portion of those of Persia and Chaldæa, if they were not precisely the same, which this discourse of the learned president goes directly to prove; that Belus, the son of Nimrod, inventor sideralis scientiæ,

who completed the Tower of Babel, and was the first puissant sovereign of the Higher Asia after the dispersion; it is scarcely possible, considering all that has before been said on the subject, for a moment to doubt.

To satisfy himself in respect to the important fact stated in the Dabistan, relative to an Hindu monarchy having been antiently established in Iran, Sir William entered into that minute investigation of the antient languages of Persia and India, of which, as the first linguist of his age, he was so fully capable; and, after a strict examination, with confidence declared to the Asiatic Society, that hundreds of Parsi nouns are pure Sanscreet, with no other change than such as may be observed in the numerous vernacular dialects of India; that very many imperatives are the roots of Sanscreet verbs, and that even the moods and tenses of the Persian verb-substantive, which is the model of all the rest, are deducible from the Sanscreet by an easy and clear analogy. On perusing the Zend glossary, presented to the public by M. Anquetil, in his famous ZENDAVESTA, he was inexpressibly surprised to find that six or seven words in ten were pure Sanscreet, and even some of their inflexions formed by the rules of the Sanscreet grammar. Now, he observes, "M. ANQUETIL most certainly, and the Persian compiler most probably, had no knowledge of Sanscreet, and could not, therefore, have invented a list of Sanscreet words; it is, therefore, an authentic list of Zend words which had been preserved in books or by tradition; and it follows that the language of the Zend was at least a dialect of the Sanscreet, approaching perhaps as nearly to it as the Pracreet, or other popular idioms, which is known to have been spoken in India two thousand years ago*."

---

* Notwithstanding these arguments, it would be disingenuous in me not to inform the reader, from recent information, that the authenticity of the DABISTAN is *disputed*, and consequently,

No more powerful evidence, I am convinced, will be required for the union, political and religious, at some remote period, of these antient people, before the departure of the Hindus from Iran, never to return, for the regions nearer to the *rising sun*, the favourite object of their adoration; and that we do not find the Devanagari character at Persepolis, Sir William is of opinion has arisen from the circumstance of their migration eastward having taken place *prior* to the construction of that antient palace. A better reason I submit, with all due deference, may perhaps be given, that the Devanagari letters, believed by the Hindoos, as before remarked, to have been revealed to their great legislator *by a voice from heaven*, did not then exist—for the "square Chaldaic letters," so nearly in his own opinion resembling the Devanagari, as to appear the *same*, before the latter were inclosed in angular frames, were not then formed—the decalogue had not yet been *written by the finger*, nor promulgated by the voice, of Deity.

Characters, only, not letters, and notations like those in the sister kingdom, called Ogham, of which so many specimens have been presented to the public by the late indefatigable General Vallancey, and many of them, also, of the dart or javelin form, like the Persepolitan, were then only known. The powers of these characters are now lost, after the lapse of three thousand years, and were perhaps *then* fully known to none but the priesthood, the only class of literati in the antient world. Ogham, in Irish and in Sanscrit, according to Vallancey, means mysterious, and if the first Hibernian settlers, his

---

the veracity of the facts related in it are doubted by very high Indian scholars. The existence, however, of a vast empire in very antient periods, comprising, under the name of Iran, a corruption of Elam, the greater part of the Higher Asia, can be proved from the united attestation of classical authors, and the decision of our great orientalist will still be firmly established. In the proposed Appendix, I shall consider the subject at considerable length.

famous AIRE-COTI, or in other words Arachosians, came, as he has assiduously laboured to prove by a great variety of curious facts and an extensive display of oriental erudition, from the confines of Persia to that country, they would naturally enough bring with them the mysterious symbol of the Persian religion. We may, therefore, safely come to this conclusion, that, although the precise date of the building of the superb palace of Persepolis cannot be ascertained, no more than can the exact period of the migration eastward of the Hindoo nation, yet, that construction took place during the reign of the earliest dynasty established *after* that migration—when the vast empire of IRAN still flourished in unimpaired vigour;—at that period when Persepolis and Babylon were under the sway of the same powerful monarch, and under the influence of the same Sabian superstition. Then it was that these mystic characters, so impenetrable to modern scrutiny, were invented by that sacerdotal race, who bowed to the solar orb, and watched on its altars the never-dying flame. Then it was that they engraved them on the eternal jasper, that has preserved them in such perfection for the mute admiration of posterity. Nor ought it to excite surprise, that a race of such determined ignicolists, trained in the profoundest mysteries of Mithra, should wish to preserve inviolate from the profane vulgar the sacred symbols of their creed—that they should have recorded their veneration for *fire* in characters that designated FIRE, and their adoration of the *sun* by those that symbolized his RAY.

FINIS.

Postscript.

Shortly will be published, an APPENDIX to this work, containing strictures, too long for insertion here, illustrative of many passages in the preceding pages, derived from the sources of History and the Sacred Writings. It will also be embellished with an engraving of the zodiacal objects and asterisms pourtrayed on the Persepolitan monument described above, as well as with another of that particular brick mentioned in p. 87, which has the lion stamped upon it; doubtless, the MITHRIAC LION. The engraving of the Persepolitan monument, from the numerous figures upon it, will prove expensive, but the price of the Appendix shall not exceed *half a guinea;* thus making the entire work ONE GUINEA AND A HALF, which, considering its elegance and decorations, will, it is hoped, not appear extravagant, especially as similar works on Oriental subjects are advertised at a far higher price. Subscribers, however, will please to notice, that it will be entirely *at their option* to purchase it, or not, as the present volume is *complete without it;* although it may be gratifying to the antiquary to have the important subjects above discussed, in some instances, more minutely investigated. Since this work went to press, I have been informed that some very interesting accounts have been transmitted from Asia relative to an actual change of the course of the great river Euphrates, having taken place at some remote æra in the vicinity of Babylon, by which event many geographical difficulties may be explained. In the preceding pages, too, no notice has been taken of the OBELISK, 130 feet in height, said by Diodorus to have been erected in Babylon by Semiramis, hewn in one solid mass out of the mountains of Armenia, and conveyed thence on rafts down the Euphrates to that capital. The apparent incredibility of the fact in that infant state of mechanical science, and the entire silence of travellers concerning any remains of so vast a column, occasioned the omission, which shall be rectified in the Appendix; for it must, by this time, be evident to the reader, that nothing was impossible to so persevering a race. They, who, by their skill in mechanics, could raise pyramidal mountains, might certainly,

by the same skill, remove them. Should any fragments of that column ever be recovered from the deep morass in which for ages they have lain buried, as it probably contained an INSCRIPTION, it will then be seen what was the *real character* at that time used in Babylon, and whether it was distinct from that impressed on the bricks in our possession. In the proposed Appendix a more complete LIST (alphabetically arranged) of the Subscribers shall appear than that given below, which, though truly respectable, is by no means sufficient to remunerate the author for the expenses incurred in the course of this publication. Subscriptions, therefore, to meet those expenses, will continue to be received at the British Museum, and by Mr. MURRAY, Albemarle-street, at ONE GUINEA AND A HALF, including the APPENDIX.

SUBSCRIBERS.

THE HON. COURT OF EAST INDIA DIRECTORS, 40 COPIES.

Right Hon. Earl Spencer, 2 copies
Right Hon. the Lord Chancellor, 2 copies
His Grace the Archbishop of York
Lord Bishop of Durham, 2 copies
Right Hon. Charles Yorke, 2 copies
Right Hon. Sir William Scott, 2 copies
Right Hon. Sir John Nicholl, 2 copies
Lord Bishop of Chichester, 2 ditto
Lord Bishop of Rochester
Rev. Samuel Parr, D.D. Hatton, Warwick
Rev. Charles Burney, LL.D. Deptford
Rev. Mr. Archdeacon Nares, Reading, 2 copies
George Nicol, Esq. for the King's Library
Rev. Samuel White, D.D. Vicar of Hampstead
Henry Colebrooke, Esq. late President of the Asiatic Society
Sir Edward Colebrooke, Bart. Bengal
Right Hon. Earl of Mountnorris, 2 copies
Right Hon. Lady Lyttleton, 2 copies
The Hon. Mrs. James Yorke, Forthampton Court, 2 copies
Mrs. Manningham, Queen Anne-street West
Mrs. King, Beckenham, 2 copies
Sir John Malcolm, H.C.B. Author of the History of Persia
Sir Samuel Toller, Madras
Sir Alexander Croke, LL.D. Studley, Oxon
Samuel Meyrick, LL.D. Doctors' Commons
Edward Toller, Esq. Doctors' Commons
The Hampstead Book Society.
George Kinderley, Esq. Lincoln's Inn Fields
Sir Robert Peat, Bart. New Brentford, 2 copies
George Nassau, Esq. Charles-street, Berk. Squ.
Walter Butler, Esq. Havant
John Penn, Esq. Spring Gardens
John Stephenson, Esq. Great Ormond-street
John Smith, Esq. Clapham Common
Rowland Stephenson, Esq. Queen-square
A. C. Giese, Esq. Prussian Consul, 2 copies
Major General Hutton
Rev. John Ravenhill, D.D. Vicar of Tooting
Rev. Richard Cranmer, A.M. Mitcham
James Farrer, Esq. Bath
William Money, Esq. Montague-square
John Neave, Esq. Gloucester-place
The Philosophical Society of London
John Badeley, M.D. Chelmsford
T.J. Pettigrew, Esq. Surgeon, Bolt-court, 2 copies
Rev. Richard Hilliard, A.M. Stockwell
James P. Heath, Esq. Middlesex Hospital
William Cotton, Esq. Exeter College, Oxford
Rev. H. D. Morgan, A.M. 2 copies

SUBSCRIBERS.

Lady Lucas, St. James's-square
Right Hon. Earl of Crawford and Lindsay
Lord William Fitzgerald
Sir Robert Preston, Bart. Downing-street
Sir John Lubbock, Bart. High-Elms, Down, Kent
Sir William Kay, Bart. Mortlake
Lieut.-Colonel Sir James Bontein, Charles-street, Berkeley-square
Adam Askew, Esq. Wimpole-street
Major Askew, Down Hall, Kent
Rev. Henry Fly, D.D. F.R.S. St. James's
Rev. Charles Henry Hall, D.D. Dean of Christ Church, Oxford
Hon. George Winn, Lincoln's Inn
Thomas Hardwick, Esq. Berner's-street
William Meredith, Esq. Harley Place, New Road
John Yenn, Esq. F.S.A. Kensington Palace
The late David Pike Watts, Esq. Portland-place
Rev. Adam Clarke, LL.D. Liverpool
Rev. Dr. Collyer, Camberwell
Rev. W. L. Bowles, A.M. Bremhill, 2 copies
Robert Humphries, Esq. Ivy House, Chippenham, 2 copies, for Chippenham Book Society
Robert Clutterbuck, Esq. Watford, Author of the History of Hertfordshire
Rev. D. Roderick, A.M. Watford
Rev. Richard Crawley, A.M. Alfred-place
Daniel Moore, Esq. Lincoln's Inn
Archer Barlow, Esq. Austin Friars
Archer Barlow, Esq. Junior, ditto
Rev. Thomas Barne, A.M. Manor-house, Conyford, Kent
John Harding, Esq. Kentish Town
Septimus Miles, Esq. Kentish Town
Naphtali Hart, Esq. Camden-street, Islington
John Landseer, Esq. Foley-street, Marybone
Mr. Moses Benton, Southwark
John Jennings, Esq. Evershot, Dorset
Rev. Mr. Cutler, M.A. Sherborne
John Rogers, Esq. Yarlington Lodge, Somerset
A. Hawkins, Esq. Kingsbridge, Devon
Mr. James Langdon, Sherborne
Mr. Elias Penny, ditto
Liskeard Book Society, Cornwall
Wincanton Reading Society, Somerset
Rev. Mr. Bradford, Stalbridge, Dorset
R. Toller, Esq. South Petherton, Somerset
J. Nicholetts, Esq. ditto
Rev. Mr. Williams, Marston Magna, ditto
Mr. Moore, Surgeon, Yeovil, ditto
Mr. King, ditto
Rev. Philip Fisher, D.D. Master of the Charter House
Rev. J. Russel, M.A. Head Master of ditto
Rev. Dr. Nares, Professor of Modern History, Oxford
Rev. Gilbert Buchanan, LL.D. Woodmansterne, Surrey
Francis Const, Esq. Soho-square, 2 copies
Charles Cartwright, Esq. Accomptant General to the East India Company
John Pearse, Esq. Chilton Lodge, Berkshire
Richard Paul Jodrell, Esq. Portland-place
John Wilkinson, M.D. F.R.S. Southampton-row, Bloomsbury, 2 copies
William Urquhart, Esq. Great Baddow, Essex
Rev. Mr. Penrose, Writtle, Essex
John Popplewell, Esq. Woodford, Essex
Andrew Bain, M.D. Curzon-street, May Fair
George Pearson, M.D. George-street, Hanover-square
Michael Constable, Esq. Surgeon, Woodford
Rev. G. S. Faber, B.D. Rector of Long Newton, Durham
William Sleigh, Esq. Stockton-upon-Tees, ditto
Rev. John Gilpin, ditto
Rev. T. Le Mesurier, A.M. Rector of Haughton, ditto
Rev. T. Ewbank, A.M. Rector of Elton, ditto
Rev. W. Fountain, A.M. Rector of Middleton, ditto
Rev. William Sparrow, A.M. Walthamstow
Edmund Henry Barker, Esq. Thetford, Norfolk
Henry Albert Mathew, Esq. Russell-place
Rev. Robert Delafoss, D.D. Richmond-green
Rev. Charles Delafoss, A.M. Richmond
Rev. J. Banks Hollingworth, A.M. Walthamstow
Rev. Henry Fletcher, A.M. Twickenham
Mrs. Fletcher, Twickenham
George Brooks, Esq. ditto
John Thomas Brooks, Esq. ditto
Rev. Edward Owen, A.M. Mortlake
John Henry King, Esq. Surgeon, ditto
John Barlow, Esq. St. George's-place
Thomas Adderley, Esq. Great Surrey-street
Thomas G. Ramsay, Esq. New Bridge-street
Charles Lomax, Esq. Litchfield
James Park, Esq. Figtree-court, Temple
Edward S. Byam, Esq. Princes-street, Hanover-square
Mr. Henry Steel, Windsor-terrace
Mr. D. S. Maurice, Fenchurch-street

SUBSCRIBERS.

William Whitton, Esq. Grove Hill, Camberwell, 2 copies
Rev. George Henry Storie, A.M. Grove Hill, 2 copies
James Jacks, Esq. Grove Hill, ditto
John Dixon, Esq. Mecklenburg-square
John Jacks, Esq. White Lion-court, Cornhill
John Hillersdon, Esq. Barnes, Surrey
Stephen Pitt, Esq. Kensington
Stephen Pattisall, Esq. Change Alley
Thomas Græme, Esq. Oldbury Court, near Bristol
Thomas Waller, Esq. Jun. Bromley, Kent
James Scott, Esq. Surgeon, ditto
Peter Godfrey, Esq. Colchester, Essex
John Miers, Esq. Strand
Richard Addams, Esq. Baker-street
William Squire, Esq. Peterborough

N. B. Other respectable names are kindly promised the Author from the UNIVERSITIES, and the various BOOK-SOCIETIES established in different parts of the kingdom; but the period for publication having arrived, their insertion is necessarily reserved for the APPENDIX.

December 20th, 1816.

Directions to the Binder for placing the Plates.

1. RUINS OF BABEL, to precede Section I.
2. PERSEPOLITAN CHARACTERS, to precede Section II.
3. TANJORE PAGODA, to face p. 49.
4. MEXICAN TEMPLE, to face p. 97.

MAURICE, Printer, Fenchurch-street.